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CAMERA CRAFT

A Photographic Monthly

Volume XVIII

January to December, 1911, Inclusive

Published by
FAYETTE J. CLUTE
413-415 Call Building
San Francisco, : Cal.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY
FAYETTE J. CLUTE, Editor and Proprietor
CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII SAN FRANCISCO, CALIFORNIA, JANUARY, 1911 No. 1

Practical Pointers On Studio Work

By R. W. EDDY

Our Article Winning a Wold Air Brush This Month

With Illustrations by the Author

How to Run a Studio, is what the editor wants; but, even should he find a man capable of exhausting the subject, he could hardly provide the necessary space. However, I believe I can give my younger friends some good, sound advice, that, if heeded, will be of no little benefit. And such advice as I may offer is based on what I have learned by actual experience; not a lot of theories without foundation.

In the first place, get a good, up-to-date camera of the 11x14 size; one on the order of Century Grand or New York Studio Outfit. And the reason for so doing is just this: You are no doubt a stranger to nearly every person that will enter your studio, and you will find that you are judged, in no small degree, by the appearance of your camera. The average person has a distinct recollection of a small, cheap-looking instrument that produced some mediocre work for him at an outing or in a post card tent. When you do want a large camera, you have it; and, for myself, I prefer the 11x14 size, even for the small work.

You will require one good white background with floor extension, one red-black ground, and a large ground for groups and the like. Have at least two good head screens, one white and the other black; and, what I find most useful, a plain screen, two feet wide by six feet high, covered with thin, black cloth. This I use to shade the drapery in full-figure work. It should be placed between the subject and the light, as close to the subject as possible without

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being in the picture, unless the subject is short or in a sitting position, when it should be moved toward the light until it shades just up to the chin.

Now for a few words about operating. Find just where you must place the subject for the different kinds of lightings, and keep this information in mind. Then you will be able to place your sitters at once and without asking them to get up and move two or three times. When you go into the operating room with your subject, keep up a conversation of some kind, as it enables you to study the sitter without appearing to do so. As long as you are talking to a person, it does not cause embarrassment to look at him, but keep looking at a person without carrying on a conversation and he begins to "feel foolish," as a sitter once explained to me. Try to keep moving and do not stand and look, giving the impression that you are inexperienced or in doubt. Handle your camera and accessories quickly, but quietly, not going at it as if you were trying to see how much furniture you could break.

First, place your camera somewhere near where you will use it; then take a look at the ground-glass and get it just where you want it, and proceed to focus. There is a great diversity of opinion about the proper way to focus, but the method I use, and one that has the endorsement of some very successful photographers, is as follows: Focus the eyes just as sharp as you can, then rack the ground-glass toward the lens just as far as you can and still keep the eyes sharp; sharp, I say, and not blurred, and this will leave the nose in good focus also. By doing it in this way, you will get the full depth of focus of the lens; which, in my opinion, is none too great in lenses of high speed, such as f-4 or faster. Never stop down your lens unless it is absolutely necessary in order to get a sharp negative, for there is no reason in paying a high price for a lens working at f-4 if you are going to stop it down to make your pictures.

I use a 6½x8½ portrait lens of sixteen inches focus, working at f-4, making 5x7 groups, when there are only two rows of subjects, with lens wide open, and have no trouble in getting them all in focus. If you use the swing-back with good judgment, you can accomplish a great deal with your wide-open lens. In using the swing-back, simply bear in mind that the farther away the object is from the camera, the closer the ground-glass must be to the lens. If you are taking a picture of the baby sitting on the edge of a table, the feet will be closer to the camera than the face, so swing the top of the ground-glass back away from the lens, which will bring feet and face in focus at the same time. In making a group of two persons, one behind and to one side of the other, use the side swing to bring the side of ground-glass showing the one behind, nearer to the lens. In making a group of two rows of heads, bring top of ground-glass back until both rows are in focus at the same time.

There is a little convenience that I want to mention here, one that will save lots of trouble and disappointment. Take some pieces of thin mount or bristol board and cut an opening in them the exact size of the different pictures you make, say, one-fourth square, one-half square, full cabinet, and so on; doing the same in the ovals, leaving the cardboard about one-half inch wide all around the opening. Then, when you are focusing, just place the desired size of cardboard form up against the ground-glass and you will have no

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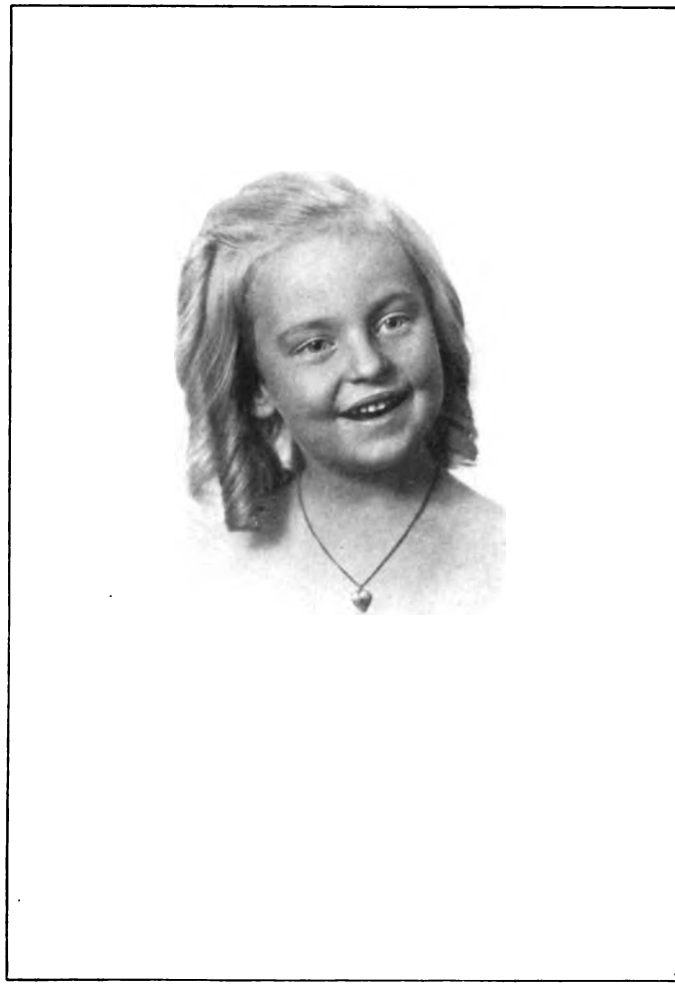
trouble through getting the image too large or too small for the size of picture your customer has picked out. I find, a great many times, that these forms aid me in determining how the finished print will look, before the negative is made. If you try to compose a small picture on a large ground-glass, you will find yourself saying, as you look over the proofs: "Had I known they were going to look like this, I would not have made the exposure." The forms advised above will save you from many such regrets; not all, but a part at least.

A few words about making negatives. If you have always done your developing in a tray, it will be hard to give up the method; at least, I found it so; but once you use the tank until you get just the kind of negatives you want, you will have to admit that the tank will give you more good printing negatives than you can get by using the tray. As the plate demonstrator for the Eastman Company has complimented me on the quality of my negatives, and could offer no suggestions as to how they could be improved, I may be pardoned for describing my method of tank development. I use the Eastman tank because it is watertight and can be reversed as often as one likes without slopping developer about. I fill the tank nearly to the line with water at just seventy degrees Fahrenheit, and then put in stock solution as given in the Seed formula. I develop just nineteen minutes, reversing the tank about every three minutes; then rinse well with three changes of water, turn on the electric light, take plates out of cage and place in fixing bath. This last is made up according to the formula given for developing papers, except that I use only one-half the given amount of acetic acid when making it up and add the other half after



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the bath has been used for some time. I think this the best plan, because it keeps the amount of acid more uniform during the whole time of using the baths. I fix my negatives for a full thirty minutes, and then wash in fast running water for fifteen minutes. The acid fixing, the long fixing, and short washing are resorted to because the tap water here in the South tests eighty-seven degrees through the warm season; but, in handling plates in this way, there is no trouble through softening of the films.

If you want nice, clean negatives, there is one thing you must be careful about, and that is in placing the plate-holding cage in the tank of developer Place your forefinger on one side and the thumb on the other corner of the tank rim, and slide the cage down between, guiding it so that it does not bind and stick. If it does catch and stop, if only for a second, you are pretty sure to collect a crop of air bells on the emulsion side of the plates; and pulling the cage up and down after these air bells once attach themselves does but very little good towards knocking them off. Developing as described above gives me good negatives for Aristo-platino and Artura papers. For vignettes and white grounds, I develop considerably longer and use plenty of bromide in the developer; or else I use a stronger developer, in a flat tray, with plenty of bromide, and carry development somewhat further than for dark grounds. I find that when a vignette is developed the same as a dark ground, it does not print with enough snap and brilliancy. I am always very careful to give my plates good, full exposure; as, in my estimation, an undertimed negative is worthless; while, on the other hand, an overtimed plate, if not given

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more than six times the correct exposure, will give a good printing negative if developed in the tank.

And, after having taken good care to get a good negative, be careful you do not spoil all your good work in the retouching. If you do the retouching

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yourself, or hire it done, see that all customers are treated alike and all get good work. For myself, I believe in retouching a negative so that it shows a fine stipple, and has had as much retouching as it will stand and not lose the likeness. Say what they may, most of the men and all of the ladies like to look just as nice as possible in their photographs. Here and there one may explain to a friend that it is the photographer's fault that he has been made somewhat better looking, but his so doing does not mean that he is displeased with the work. Furthermore, if the negatives are given a fine stipple, when you come to make an enlargement you will get a much better result than when enlarging from coarse work.

When you come to print, if you are using printing-out paper and happen to over-print, print another. Don't let it go and try to satisfy your customer by telling him the old fiction that you thought he would prefer having some of them rather dark. He may take the prints, but mark my word, he will not forget it. If you are using developing paper, do the same. Time every print and they will all be alike. I have a cheap watch hanging right over my printing machine, and it takes no longer to print them all alike than it does to have each one different from all the others. And when they are finished, they will be better looking prints than if you had guessed at the time and tried to correct matters in the developer. And in making sepias, it is impossible to get first-class results without uniform and correct exposure of the prints in the first instance. I have heard a demonstrator tell his class that they must so time their prints that they would develop in from forty-five to sixty seconds in first development, if they wanted good sepia prints; and I chanced, a short time afterward, to see three of these same photographers using the same brand of paper, printing so far that the prints were fully developed in ten to fifteen seconds and had to be hurried into the fixing bath. And these same photographers wondered why their sepia tones were so flat and lifeless. And remember, your paper is not capable of making good prints without some help, and the more help you give it, the better your finished work will appear. Use plenty of developer, as being stingy with your chemicals is penny wise and pound foolish. You need not be wasteful, but use plenty.

And to return to the treatment of the customer; follow the Golden Rule, treat every customer that comes into your studio, from the time he enters until he leaves, just as you would like to be treated yourself. Nearly every one likes to joke and laugh; and, if your customers are that kind, don't be grouchy, but joke with them and get them at their ease as soon as possible after they come in. If the parents bring in one of the little ones, take plenty of notice of the child, but do it from a distance at first. Do not rush up to them and try to make friends as soon as they enter, for, as a rule, children are somewhat bashful. A few words at a distance, with the right kind of an expression, and the child will not be afraid of you in the least. There is not more than one baby out of a hundred brought to my studio that I cannot take and handle without their being afraid. Of course, it is somewhat of a knack, something that cannot be explained in words, but it is a knack that can be cultivated quite easily if one will but observe the effect of different treatment when a child is being dealt with.

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Charge your customers all the same price for the same style of work; charge enough so that you can afford to make first-class work, and do not deliver any that is not first class. Always bear in mind that a dozen pictures are so many advertisements that will either bring you new customers or discourage prospective customers from coming to you; each of the twelve having its good or bad effect on twelve different people, perhaps more, as many will see each separate one. Compare your own work with that of other good photographers, and, if it does not look as good as theirs, get busy and make it so that it does. Keep your street case filled with a few pictures of people that are well known in your town, but do not invite in half the population to make samples of, and then give them one for their trouble. They will come of their own free will if you wait; and for my part I would rather be waiting than making a lot of work to give away.

I have told you a few things that have been learned by experience; things that are worth taking into account; and things that I can only hope may be of benefit to some of the younger members of the profession whose experience is mostly limited to a perhaps too brief apprenticeship with some one particular studio.

"Words take light from mutual reflection, like an actual train of fire over precious stones."—Mallarme.

As a general rule, it is better to give too little of the character of an object in the shade than too much.—J. D. Harding.

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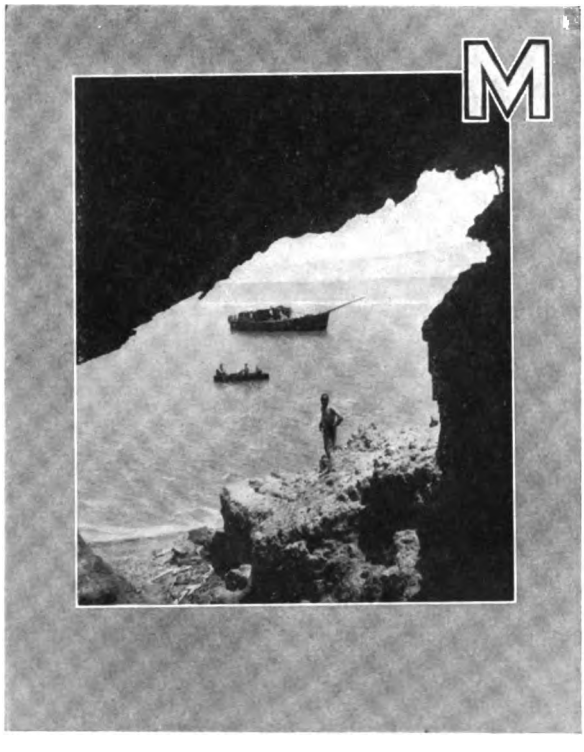
Photography on the Dead Sea

Article and Photographs by the Photographic Department
American Colony Stores, Jerusalem



LOOKING OUT UPON THE DEAD SEA

MEMBERS of this department recently took a trip by motor boat on the Dead Sea, a trip of unusual interest, from a photographic as well as from a general and scientific point of view. A short account, together with a few of the pictures, might not be unwelcome to CAMERA CRAFT readers.

The Medaba mosaic floor, discovered in 1898, a geographical map of many Levantine countries and dated back to *circa* 499 A. D., making it the oldest map in the world, represents boats on the Dead Sea; but since that period none have plied its waters. During the last century two attempts were made, one by Lieutenant Lynch, of the United States Navy, and the other by the Duc de Luynes, to circumnavigate and investigate this, the deepest fissure on the earth's surface, so historical and yet so little known. Recently a concession has been obtained by a Mohammedan (with a Jewish partner, who furnishes the money) to ply the sea; the concession to expire in ten years, when, whatever boats are on the sea, together with all their installations, revert to the government; they, meanwhile, paying a large monthly stipend. This boat, originally a sailing boat, is now fitted with a petroleum motor, which propels her from five to seven miles an hour; measures some forty-eight feet in length, carries a load of about forty tons, and can accommodate fifteen people without excessive discomfort.

Towards the end of May, after descending almost four thousand feet, the barometer indicating twelve hundred and ninety-two feet below sea level, with the heat about one hundred degrees Fahrenheit, we spent a week on these

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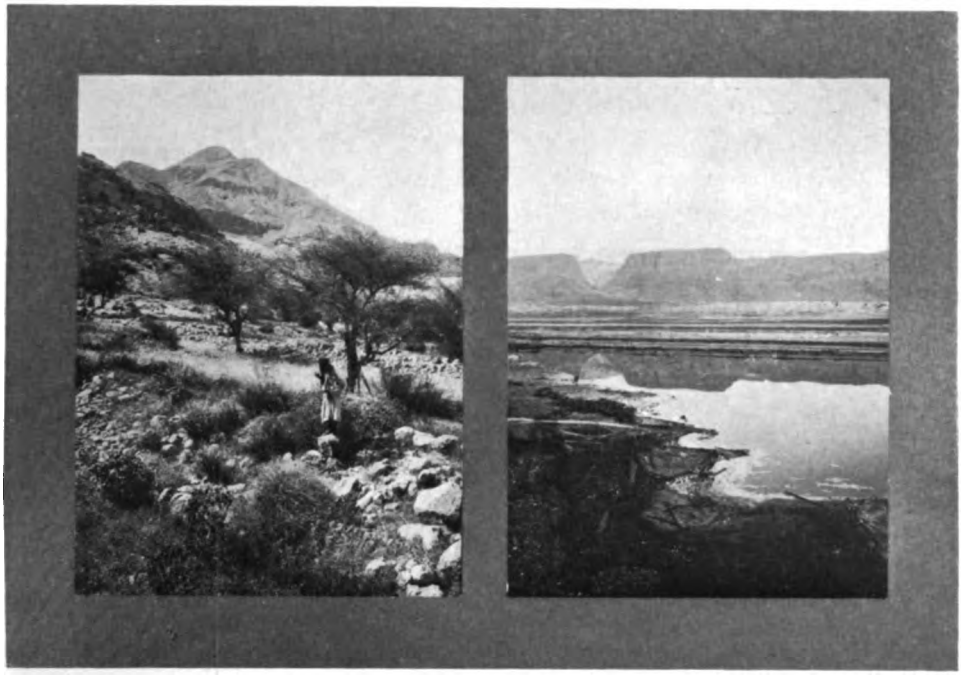

ENGEDI ON THE WEST SHORE VIEW OF MASADA

briny waters. We visited Engedi, Masada, Jebel Usdum, Ghor El Safieh, Ghor El Mizraha, the Arnon, and Calirrhoe. The chief object of the trip was to secure as complete a set as possible of pictures showing the remarkable sites on

SUBMERGED FOREST MOUTH OF RIVER ARNON

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the shores of this unique body of water. The light and other photographic conditions left nothing to be desired, the sole drawback being the bad effects of the salt-impregnated atmosphere on the exposed metal parts of our cameras. We used the cave in Jebel Usdum, a cave in the solid rock salt, for a dark room.

The west short is almost an unbroken mountainous wall, entirely limestone, varying from three hundred to twenty-one hundred feet in height; striking, unique, arid, inhospitable, almost completely waterless, and with little or no shore or plain except at Engedi. Hither David, pursued by Saul, fled to the sheepcotes, and here he spared Saul's life, vindicating himself of the baseless aspersions made against him. Here the wild goat or ibex, that gives its name to the spring, is seen silhouetted against the sky on the craggiest, roughest rocks and trails. The coney, also, is found here; and the henna, or camphire, as in Solomon's day, grows wild. The shittim tree, of which the ark and tabernacle were constructed, and which yields gum arabic, is seen here freely. Masada, two-thirds of the way down the west shore, is the most tragic fortress in the world. It was here that the last of the Sicarii or Zealots assembled, after Jerusalem was destroyed by Titus, determined to maintain and defend their hopeless independence; and here, when hope deserted them, they preferred to slaughter their wives and children, and then, by lot, put an end to the existence of the last handful, some nine hundred and sixty, so extinguishing the last spark of Jewish independence, rather than fall into the hand of the Romans. This detached, impregnable fortress presents an incline of seventy degrees and a height of seventeen hundred feet. The surrounding rampart or wall, built by the Romans, together with evidences of their two camps, are hauntingly fresh.

At Jebel Usdum, the mountain of salt, six miles long, that rises four hundred feet above the water, there is a cave, which we explored for four hundred feet, finding a shaft, eroded by the rain, one hundred feet high. Here hung snow-white stalactites from the ceiling, which, when broken, yielded transparent salt prisms and cubicles.

The gorge of the Arnon, and the whole east shore of the Dead Sea, is of variegated sandstone, and is much better watered than the opposite one. This gorge is easily the most beautiful sight in Palestine. With sheer sides, one to three hundred feet in height, with overhanging or dovetailing rocks, forming a fifteen-foot passage, that allows the seething, swirling waters, with their cascades and whirlpools, egress to the sea. The majesty, the grandeur, the intricacy of design in the veining of these rocks, far surpass the most extravagant dreams of a Crœsus. The hot baths of Calirrhoe, where Herod sought a cure in vain for his last, fatal illness, make, with their copious hot and cold water streams, an ideal winter resort. The castle of Machærus, where John the Baptist was beheaded, stood nearby. This was the land of Moab, and here the famous inscribed Moabite Stone and Mosaic map were found.

It has always been thought that the Dead Sea, like the Salt Lake of Utah, is gradually drying up and its waters receding. Our picture, showing one of the many partly submerged forests on these shores, proves the opposite. Thirty years ago a small island could be seen near the north shore, but it has since then gradually disappeared.

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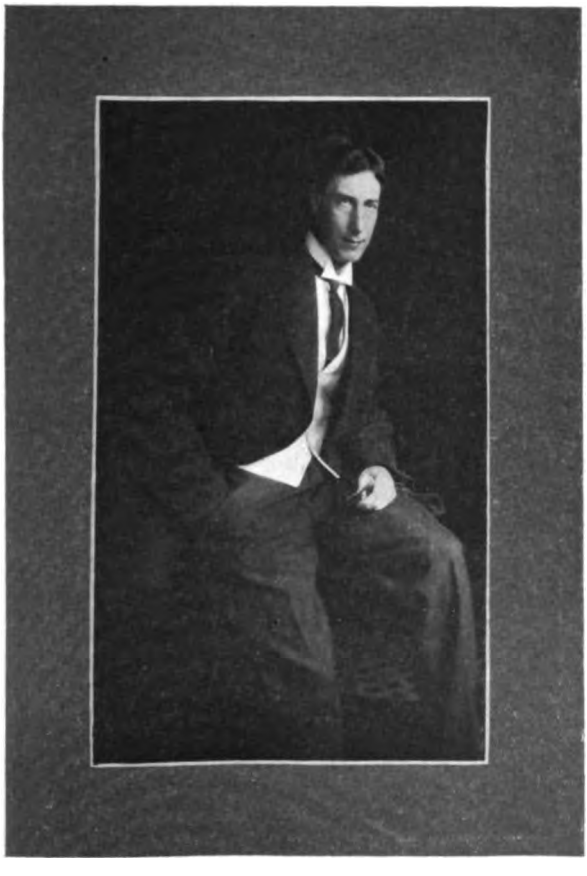
The Making of An Artist

By F. Belmont Odell

Illustrated by the Author



THE AUTHOR—A SELF PORTRAIT

The brightest spot, back in my boyhood days, was the time when I found in a farm journal an article entitled, "How to Make a Camera." Eureka! At last the overwhelming desire of my life could be gratified. I would build a camera. I confided my ambition to my mother and she furnished the wooden box called for by the directions; and, with a jackknife, I set to work to transform it into a camera. At the end of three days, the embryo had evolved into a jet-black box with a hole in one end to receive the lens, and in the side pieces at the opposite end I had whittled two grooves into which a plate could be slipped, bringing it into proper position for exposure. At this stage of the development, the growth of my camera was arrested, owing to lack of funds with which to buy a lens. The camera was never finished, but that old black box was one of the most cherished of my early treasures.

In due course of time I grew big enough to work and earn money; then I bought a pocket Kodak and used it one season. But, alas! art is ever progressive; so, in the natural course of events, I gradually progressed, passing through the box-camera stage, and at last I possessed a real, folding Brownie. By this time I had learned that the taking of two exposures on the space provided for only one was not conducive to the best results; from this I progressed rapidly (I'm naturally bright), and aspired to still loftier heights. I finally

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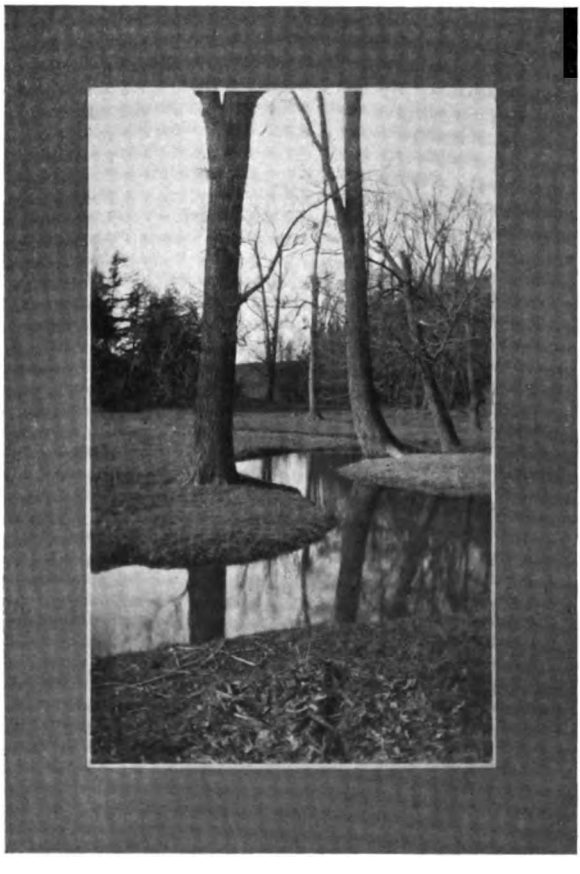
bought a view camera; and, during the two years that I used it, learned sundry facts concerning art and its attainment.

Among other things I learned, and I wish to record this for the guidance of future generations of artists, that the slide should be removed from the plate holder before making an exposure; also, that ducks have no artistic taste. I worked for an hour, one day, to get a picture of some tame ducks swimming in a pool. Now, be it known, tame ducks have a way of huddling up in most ungraceful groups just when you get ready to snap the shutter; and then, when you do finally get them separated into harmonious lines, they are out of focus, or in front of a disagreeable background, or possibly out of range entirely. Once I made a time exposure on some ducks (I like ducks) swimming; and, when I developed the plate, I found I had ducks three feet long.



WHERE NATURE BREWS HER WINE

Be it said to my credit that nothing photographic was ever too difficult for me to attempt; in fact, I tried everything I ever read or heard about in connection with amateur photography, but seldom obtained the results I expected. It was not my fault. I always followed the directions faithfully, except that I usually omitted some little inessential detail, such as focusing, or keeping the hypo out of the developing bath during development.

I once read, in a photographic magazine, instructions as to the proper method of taking an interior by ordinary gas light; giving, the article said, about thirty minutes' exposure. Here, I thought, is something novel; I would try it. I followed the directions carefully, exposed thirty minutes, and protected the lens from the glare of the light by holding a raised umbrella over and in front of it during the exposure, while I manipulated a hand mirror with the other hand, to lighten up dark corners. My wife, meanwhile, managed another looking-glass to throw reflections into the opposite corner. After completing the exposure, I carefully closed the shutter, and then discovered that I had forgotten to focus; in fact, had only

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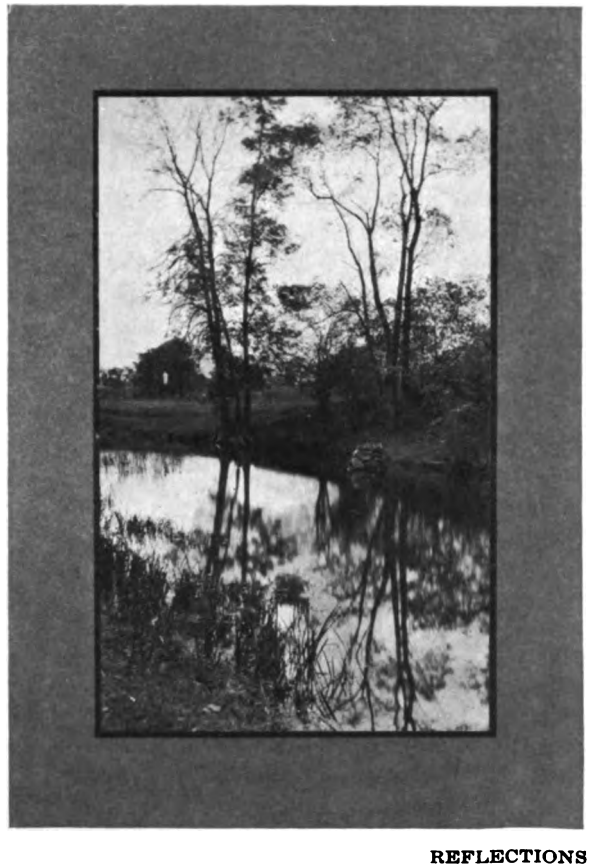
dropped the front of the camera into position without pulling the bellows out at all. And that was before "fuzzy" pictures were popular, too.

Another time I became enraptured with the beauties of a June sunset over the bay, and a longing arose within me to depict those iridescent colors. Well, I made the exposure, and the resultant print was subsequently colored with water colors. It was a masterpiece. I had it framed and exhibited it to my friends with no little pride. But, alas! the common herd cannot appreciate art; it was not my fault, it was a good picture. The uneducated rabble said: "That's fine. Is it a fried egg?" and, "What is that blotch in the middle?" We artists have a mission to perform. We must develop the artistic ego and cultivate æsthetic taste. Are you doing your share? I am mine. During the past twelve years I have exposed upwards of a million dry plates, besides a few hundred weight of films, to uplift humanity and to humbly lay my tribute upon the shrine of art. From all my exposures I have produced three pictures that were correctly composed, focused, exposed, developed, hypoed, and printed.

During all these years I have had my keenest pleasures in the pursuit of this wholesome hobby. To me, nothing is quite so enchanting as a trip afield with my camera, searching out nature's choicest gems of art amidst dancing brook and shady dell. I have derived both health and education, as well as indescribable delight, in search of restful scenery; and, returning at sundown from a tramp in nature's gallery, the peculiar charm and mystery of the dark room, with its ruby glow and the smell of pyro in my nostrils, the joys I experience will never be adequately told. And then there is the joy my poor prints have given some of my friends; and, no doubt I have done my share towards gladdening the heart of the deserving manufacturers of photographic supplies. And I possess a few pictures that have a value as mementoes.



REFLECTIONS

"Beauty is truth; truth beauty; that is all ye know on earth, and all ye need to know."—Keats.

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A Home-Made Album for Film Negatives

By Dr. C. H. Gardner

✷

I have been using, for a number of years, a home-made device, such as is described below, for filing my film negatives. It can be made, practically, without cost; it is compact yet permits one to easily get at any negative wanted; and the negatives are kept perfectly flat and away from the dust. Knowing this, I thought a description of the simple process of making one might be of interest to other users of films.

When completed, in the form of a book whose pages are pockets for holding the films, as are most of the devices of this kind; it is different in this, that it is made from a single piece of paper. Further on I will show how it may be modified in the making, so as to hold a greater or less number of negatives; but will here describe the making of a small one to hold forty-eight 4x5 films. The materials needed are: a piece of paper eighteen inches wide and sixty-nine inches long; two pieces of gummed linen tape, each five-eighths inches wide and eight inches long; and, if a cover is made, there will also be needed two pieces of light-weight cardboard, each 8½x4¼ inches, a piece of cloth 9½x10½ inches, some liquid glue, and a little photo paste. I have found that the paper best suited to the purpose is the glossy wrapping paper seen in the stores in rolls. It should be rather light in weight, and light enough in color so that writing upon it will be plainly legible. Such a piece will be cheerfully given you by almost any merchant who uses it.

Lay the paper on a large table and fold over three inches of one end; measuring accurately five inches from this fold and folding again, in the same direction. Next measure five and one-half inches from the last fold and fold back in the opposite direction from that fold. Continue folding, alternately, five inches in one direction and five and one-half in the other, somewhat after the manner of accordion plaiting, until the required number of pockets have been made, which in this case will be six. Lastly, fold in the remaining three inches. This will make twelve folds for the pockets, six on each side, and two for the ends; fourteen in all. The dimensions of the folded paper will be: length, eight inches; width, eighteen inches. See Figure 1.

Now fold from side to side, exactly in the middle, and crease it well, as shown in Figure 2. Open it flat again on the table, and fold each side toward the middle crease, bringing the end to a point about one-fourth inch short of half-way between the middle crease and the side of the paper. Crease these folds well; and, if a letter or other press is available, it is advisable to put it under pressure for a short time, as it now has the form you want it to hold. You will find that the paper, so folded into fourteen thicknesses, has twisted over at the ends of the folds so that the edges must be trimmed off even. This is best done with a sharp knife and a ruler, after which the trimmed edges are

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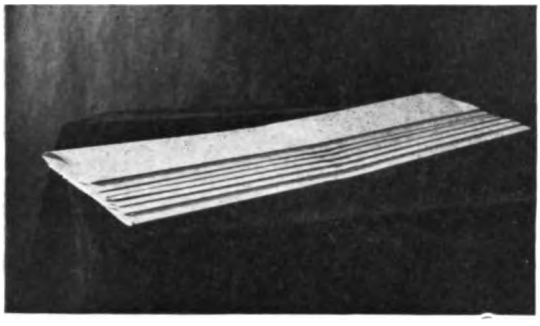

FIG. 1.

FIG. 2.

each bound with a piece of the gummed linen tape. Both folded edges, after trimming, are bound with the tape while the paper is still folded toward the middle, as otherwise it will not stay closed well, when completed. Next, sew through the folded strip at each of the three creases, including, with the sewing of the middle fold, several sheets of ruled paper to be used in making an index of the contents. The sewing keeps the negatives in their proper places; otherwise they might slip to one side and into one of the folds of the book and themselves become creased. Figure 3 will make this part clear.

A binding or cover may be dispensed with, but it gives a neat finish to the book, is not much trouble to make, and helps to exclude the dust. Taking the two pieces of cardboard, fasten them together with pieces of the gummed tape, using a strip on both sides, and leaving a space of about one-fourth inch between the two boards. The book can then be bound to this cover as it is, or you may glue cloth over these cardboards, turning it over the inside edge and gluing it fast with liquid or other glue, giving it a more finished appearance. White paper, one-fourth inch narrower all around than the inside of the two covers, and pasted down with photo paste, gives it a finished look. But, if covered with cloth in this manner, strings or tapes should be first run through the middle, to be used to fasten the folded pockets to the cover by tying them over the middle fold. Your book, fastened to its cover, by means of these strings tied over the middle fold, is done. See Figure 4.

In folding the paper, care should be taken to measure each fold accurately and to see that each fold is at right angles to the margins of the paper, as so doing insures neatness in the finished product. The pockets may be numbered,

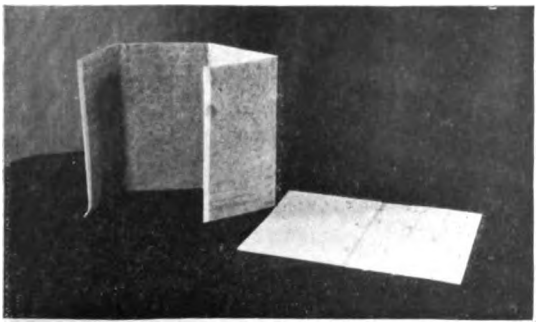

FIG. 3.

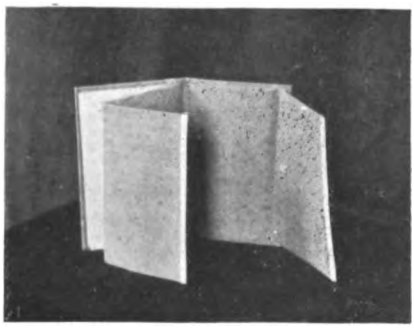

FIG. 4.

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to correspond with the negatives, on the projecting one-half inch above each one, and these numbers, with titles and whatever other data one wishes, recorded on the sheets of ruled paper that were included in sewing the middle fold.

Many modifications will suggest themselves to the maker of one of these albums, the most important being the increasing of its capacity by using either longer, or, for larger negatives, a wider strip of paper. By using longer paper, one must obviously increase the number of folds, or pockets; and by leaving a wider space above each pocket than the suggested half inch, all the necessary data regarding the negative may be written thereon.

Material other than paper may be used for making the body of the book, and any cloth that has sufficient dressing or stiffness will answer the purpose. I have one made of tracing cloth, which is good, but rather expensive, for such purposes. I have used heavy wrapping paper, but found that it made the book too clumsy and heavy, while the lighter paper was quite as durable and effective.

This description may perhaps make it appear difficult to construct one of these books, but I assure you it is not; for, with all the materials at hand, I have made one in an hour, exclusive, of course, of the time required for the drying of the glue and paste.

Beauty Is Relative

"Beauty, like all other qualities presented to human experience, is relative; and the definition of it becomes unmeaning and useless in proportion to its abstractness. To define beauty, not in the most abstract, but in the most concrete terms possible, to find, not a universal formula for it, but the formula which expresses most adequately this or that special manifestation of it, is the aim of the true student of aesthetics. To see the object as in itself it really is, has been justly said to be the aim of all true criticism whatever; and in aesthetic criticism the first step towards seeing one's object as it really is, is to know one's own impression as it really is, to discriminate it, to realize it distinctly. The objects with which aesthetic criticism deals—music, poetry, artistic and accomplished forms of life—are receptacles of so many powers or forces. They possess, like the products of nature, so many virtues or qualities. What is this song or picture, this engaging personality presented in life or in a book, to me? What effect does it really produce on me? Does it give me pleasure? and if so, what sort or degree of pleasure? How is my nature modified by its presence, and under its influence? The answers to these questions are the original facts with which the aesthetic critic has to do; and, as in the study of light, of morals, of number, one must realize such primary data for oneself, or not at all. And he who experiences these impressions strongly, and drives directly at the discrimination and analysis of them has no need to trouble himself with the abstract question, what beauty is in itself, or what its exact relation to truth or experience, metaphysical questions, as unprofitable as metaphysical questions elsewhere. Our education becomes complete in proportion as our susceptibility to these impressions increases in depth and variety."—Walter Pater.

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Yes, What Is Art?

Friend Clute:

I have kept still.

I have sat upon and screwed down my rising passions at repeated insult. I have been meeker than Moses, and milder than virgin milk, under heaped-up and repeated ribald rebuke.

But no more; the Oregon woods are now resounding to muh howls; the surging sea of my righteous wrath rolls and writhes and waves away my last poor jetsam of philosophic calm.

I asked you a couple of years ago, "What's Art?" and ever since I haven't seen a CAMERA CRAFT, or met a snip-snapper, or gazed at a "salon"; yea, or chatted with the saloon man 'round the corner, but what I've been deluged, overwhelmed, enswamped, surcharged, and surceased with punk definitions of A-R-T.

I can't start to read an advertisement in CAMERA CRAFT but there's an art definition tied to its tail. I can't get a tip on development but an art footnote hits me in the eye; I can't even thumb your cherished pages casually, and then stop to rubber at a big picture, but I find some wise guy's art impulse throbbing just abaft the rear ham of sow No. 14.

I am a modest, mild, hapless sort of a chap, by nature; I try to be decent and to bear my sorrows in silence; but you, durn you, have ruined my life, and stamped in awful letters of fire this A-R-T eternal problem; and now, now, villain, I have thee; give me muh poipers or I'll have thee loife, Count Glenedive.

What's Art?

Lord knows it isn't your fault that we don't know.

"Art is not a thing to be done, but the best way of doing whatever needs to be done."—CAMERA CRAFT, page 368, October, 1910.

Is that so?

It's the best way, is it? Well, what's the best way? What is the best way to take a picture of a haystack in September by moonlight? Fuzzy-wuzzy, fake moonlight effect at high noon against the sun; f-64 and seven-hour exposure, Seed's 27 (see back pages for prices); or to stick your thumb before a wide-open lens, expose four seconds, develop with pyro, and print on ulcerated paper with a mucilage bath?

Best way, indeed; fine dub definition that.

"Art is the love of certain balanced proportions and relations, which the mind likes to discover and bring out in what it deals with."—CAMERA CRAFT, page 366, October, 1910.

So we love to have balance, do we? And we must discover and bring out what we want to, and then it's art. Say, if that bright chap, the one who blew that out of his muffler, would serve as a jury of one, I guess we could all get first in the landscape class, eh?

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Take a hog on this side, and a piggy on that, and asservate that you just loved to discover and bring out these precious balanced entities and their "relations," and we have art. Well, well, well, that's some light—we guess not.

"Art is nature, carried to a higher power by reason of its passing through human consciousness. Thought and emotion tend to crystallize into forms of beauty, etc."—CAMERA CRAFT, page 367, September, 1910.

Oh, joy! Juberous joy! Here we are at last.

Yes, indeed, any time the average photo "pictorialist" passes a landscape through his "human consciousness," we have a form of beauty, "etc." I consider that "etc." distinctly good.

I have viewed some of those things which have been filtrated through the human consciousness; saw one onct that was hung upside down and took a prize as a genre of sunrise, and if the mutt who did it had not hollered nobody would ever have known it was his "passage" of an art impulse of an ocean busting over a lobster pot.

"Art, neither execution nor imitation."—Page 360, September, 1910.

I already had a faint idea that art was not several things, but it helps to know that it can neither be a model of native—or nature—truth; nor can toil and brains, and skilful craft in execution, help any. So we can't either follow nature, or rise by work. Well, that helps a lot more; it sure is nice to have our path smoothed by great minds made perfect.

"As our art is not a divine gift, so neither is it a mechanical trade. It's foundations are laid in solid science."—Page 318, August, 1910.

Whoopee!—here we are, sure enough. Art is not a hunch, nor is it divine afflatus. It's science, that's what it is. And science has laws, and universally recognized truths, and masters; while every definition of art by every master is strange, apart, unique, individual, and isolated. Fine, fat chance for art to be a science, eh? That's a real heck of a definition, that is. Must have been a bit shy on clip for that page, eh, Fayette J. C.?

"Art is the sensitive plate in the dark camera of history."—Page 196, May, 1910.

Touching, poetic little tribute to the growing fund of our fervid, fretting furor of misinformation. Sensitive plate, eh? What if it gets fogged, or scratched, or busted, or stepped on, or over-developed, or a cow licks the lens, or the developer upsets, or the hypo doesn't fix? In short, that sweet, mild-eyed describer would make of art an accident in the dark; and the preceding high brow made it an exact science!

Say, we're finding out what art is fast, eh?

"Art is only utterance."—Page 180, May, 1910.

Gracious, goodness, Agnes, you there, too? Tut, tut, child; trundle on to bed; papa is caming.

Utterance be dinged! If art is any dub dabster's dive into the sea of the unrecognizable, then my worst is as my best, because it is "utterance." Guess a red gum, on a green mat, with a yaller frame, would be utterance enough to get by, eh?

"Our highest ideals cannot be realized while yet our irksome sense of

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toil remains."—Page 454, November, 1909. Fourteen pigs divide this page with above-mentioned gem.

Consider the lily, it toils not, neither does it spin, yet—

If the beloved "Master," who cast forth that pearl for the rampant swine above to trample over, ever made an 11x14 carbon from a 4x5 negative, with a telegraph pole cutting his foreground right spank, dab, in its middle, he probably would have discovered that the irksome sense of toil stuck somewhat close to his consciousness.

Bet he's one of those: "Oh, I-just-threw-that-little-thing-off-in-an-idle-hour" maniacs.

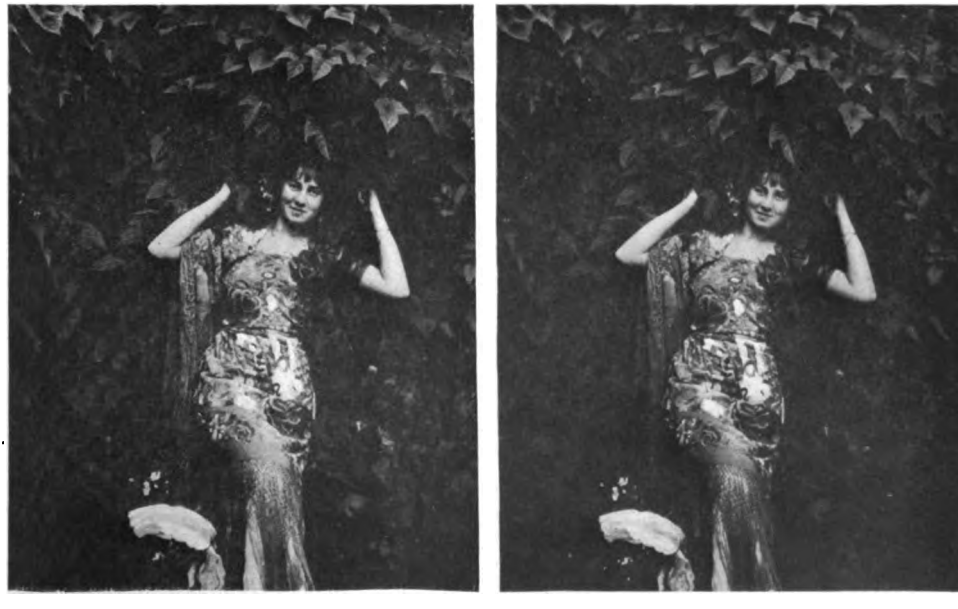
"Art is a means of union among men. Joining them together."—Page 393, October, 1910.

Well, I guess that's the conclusion of the whole matter. Little children, love ye one another. Just watch 'em do it any time a club exhibit is pulled off.

If there is a real, sure-enough, abiding, stamped-in-the-neck sign of art, it is the close, loving fellowship of artists. There is, as we must have all observed, such a tearful clinging, such a violent embracing, such a perfect amity, among great artist minds, even in little things like definitions of A-R-T.

Oh, to be sure! but as yet we never saw two "art" photographers who could stay together in the same room without smashing out every window in said room before they were pulled apart from their nice, quiet discussion of A-R-T. And we never read an art definition that jibed with any other art definition, or with anything we had ever discovered for ourself.

Say, Clute—what's art? SLEETH, of Portland.



A STEREO PORTRAIT By F. MORRIS STEADMAN
Placed at bottom of page to facilitate examination in a stereoscope. See Mr. Steadman's article following.

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STEREOSCOPIC DEPARTMENT

Stereoscopic Post Cards

By F. Morris Steadman

Illustrated by the Author

It had been many a year since I "mounted" photographs in the good, old-fashioned way, when the occasion was presented of making some stereoscopic views of the famous old smelter, home, and gardens of Los Arcos, Mexico, where I passed a month's vacation a short time ago.

I printed the views with a white margin, on ordinary weight paper, dried and trimmed them; put them again in the water, and, when thoroughly wet, piled them face down on glass on top of each other; squeegeed the water out as much as possible; applied paste to the top with a brush, and proceeded to lay it on the card and rub it down in good contact therewith. Doing all this reminded me vividly of the backaches which used to accompany the operation when there were two to three hundred such pictures

OFF A MEXICAN GARDEN By F. MORRIS STEADMAN

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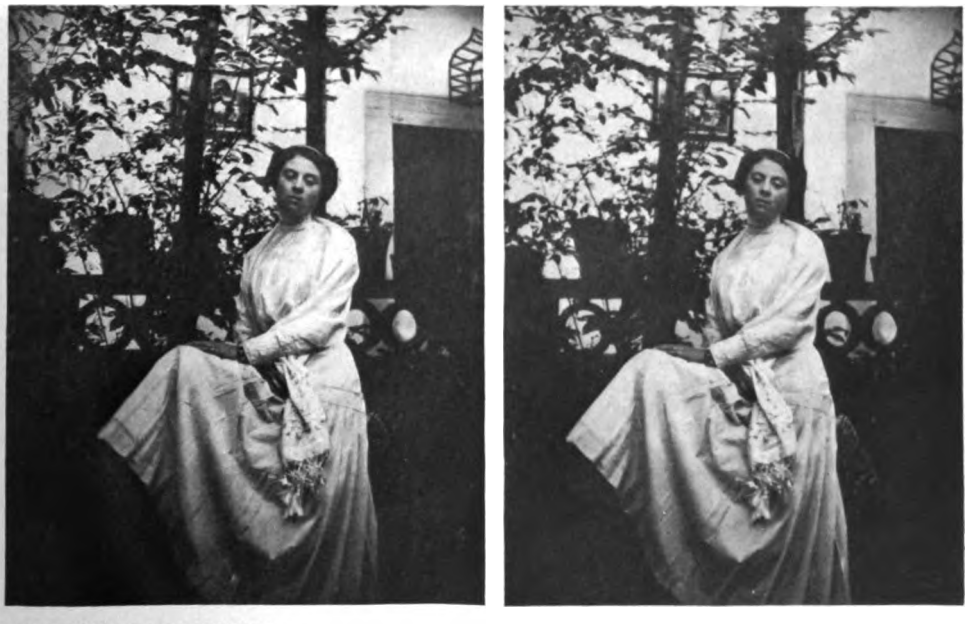
to mount. During the operations of making, or rather, of admiring these views, I became enthused anew with the beauty of stereoscopic photography; which I think is really the most fascinating branch of the craft, especially when portraiture is included. Some hints as to the handling of the No. 2 Stereo Brownie, which I used for this work, may be of interest to CAMERA CRAFT readers.

On making the first roll of film, I found that the particular camera that I had in hand, No. 864-H, was somewhat off as to its focusing scale. There are only three distances provided for: one hundred feet, or infinity; twenty, and eight feet; and, with the largest diaphragm, none of these distances was in focus. I pasted a piece of white paper along one side of the bed, and, using the front of the running block for the pointer, made a new scale of distances in the metric system, as is my custom, from infinity, or thirty meters, down to seventy-five centimeters, or about two and one-half feet. This was done practically as described in the back of my book, "Home Portraiture"; or, by placing a strip of ground glass temporarily across the back of the camera and against the rollers, and then focusing on some object at all the distances which it was desired to have indicated on the scale, marking the correct position of the lens block on the paper. By using a powerful magnifier, the focusing can be done with absolute exactness, and all the doubt as to the correctness of the scale will of course disappear. In doing portrait work at close range, it is necessary, of course, to use a tape measure to determine the correct distance of the subject and have the image sharp. If it is desired to use this camera with my book, "Complete Exposure Method and Home Portrait Helps," or my Aaba Exposure Scale, or any other exposure meter or scale, the stops marked 1, 2, 3, and 4 may be considered as the U. S. numbers 8, 16, 32, and 64, respectively.



AN OUTDOOR PORTRAIT

By F. MORRIS STEADMAN

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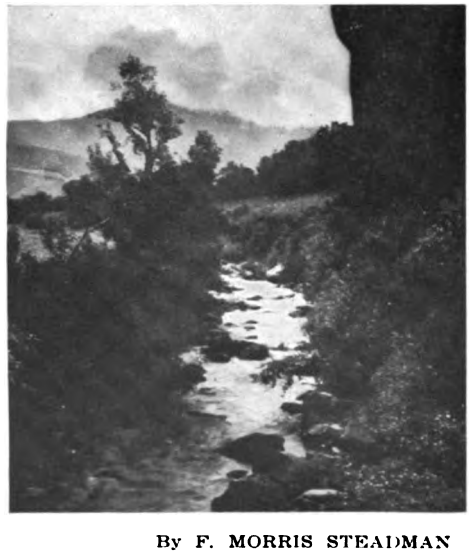
On cutting up the roll of film when the negatives are made, begin at one end of the roll and cut very carefully so that there will be about three thirty-seconds of an inch of the transparent film which borders on the image proper left at the two ends of each pair of negatives. That is to say, before cutting apart the two negatives which belong together, trim down the transparent film at each end to within the above-mentioned distance of the exposed portion. Then cut the two exposures apart and transpose them, butting the two ends together and pasting over the joint a strip of regular passe partout paper, one-quarter as wide as the regular width of such paper. In cutting the two exposures apart, if the cut be made quite close to one of the exposures, more width of transparent film is left at one end after they are transposed. This serves for the writing on of the number or description of the negative.

It will be found that when the negatives are transposed in this way a post card is exactly long enough to cover both the negatives perfectly. The post card is much lighter and smaller to mail and store than is the regular mounted view; and, being on extra thick paper, will remain perfectly flat if kept stored in that manner. To view them, simply lay them against any full-size stereoscopic view which is in the correct position in the instrument, taking care, of course, to place it near the center of the card.

The Artura Carbon Green post cards make beautiful out-of-door views; giving, as they do, almost the exact color of the grass and leaves. It is curious to note how a print that is too dark to satisfy the taste, as a single print, takes on a most desirable richness of tone and modeling when viewed through the stereoscope. Be cautious, therefore, not to make your stereoscopic pictures too light.

A hint may not be amiss as to getting the two ends of the pair of films in exact line at the time of sticking the passe partout paper over the joint. Before cutting up the roll of film, lay a good, strong piece of wrapping or writing paper on a table, stretch the film across it, and turn up and fold back the pro-



A MEXICAN LANDSCAPE By F. MORRIS STEADMAN

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truding edges of the paper so as to make a U-shaped trough the exact width of the film. Do this with care so that the folds forming the trough will be perfectly true. Leave the upturned edges of the paper at least two inches wide; and, on folding them down over the two negatives which have been cut apart, they can be held firmly in place, protecting the film from possible finger marks. Then, by cutting away a little from the center of the upturned edges of the paper, only the joint will be exposed to view ready for sticking on the strip of gummed paper. If the gummed paper be a little longer than the width of the film, the ends may be turned over on the other side so as to hold the joint very firmly; care being necessary to see that the ends are folded over squarely so as not to make a break in the white division between the two negatives.

Opportunities In Mexico

By P. B. Barnes, Leon, Mexico

Some of the many readers of CAMERA CRAFT might like to hear from a photographer in Mexico. I remember that I longed for something of the sort, years ago, when I was an earnest seeker after any information bearing on this country.

To begin: Nearly twelve years ago I was a great sufferer from asthma; and, on the advice of my physician to go to the high table-lands of Mexico and remain there until cured, I went to Durango, where I worked for an American photographer for a year. As the altitude there is very high, I was not bothered in the least with asthma while there. But, getting a roving fever and wanting to see the entire republic, I started out from Monterey with a young Canadian doing interior work. We spent, on an average, about a month or so in a place, taking interiors of business houses, offices, banks, factories, government and municipal palaces, school and family groups; in fact, anything we could get to do. We soon drifted down into the low, hot country, striking Tampico during a yellow fever epidemic. But there my asthma returned and kept me so busy that I had no time to dread the yellow fever.

In Merida, Yucatan, I met your "home portrait" correspondent, F. Morris Steadman; and, at the gait he was then going, I should have thought him able to have retired from picture making long before this. In fact, I should have been able to have done so myself; but thereby hangs a tale. In the quaint little city of Campeche, which sleeps still within the old walls built by the Spaniards centuries ago, I made up my mind that I would no longer linger in the low country, to wheeze and suffer from asthma; so I left my Canadian friend and once more set out for the table lands. I have remained on them ever since, and now I do not know what asthma is.

About seven years ago, after I had been lured into another business and received the knockout blow I should have expected, I decided to open a

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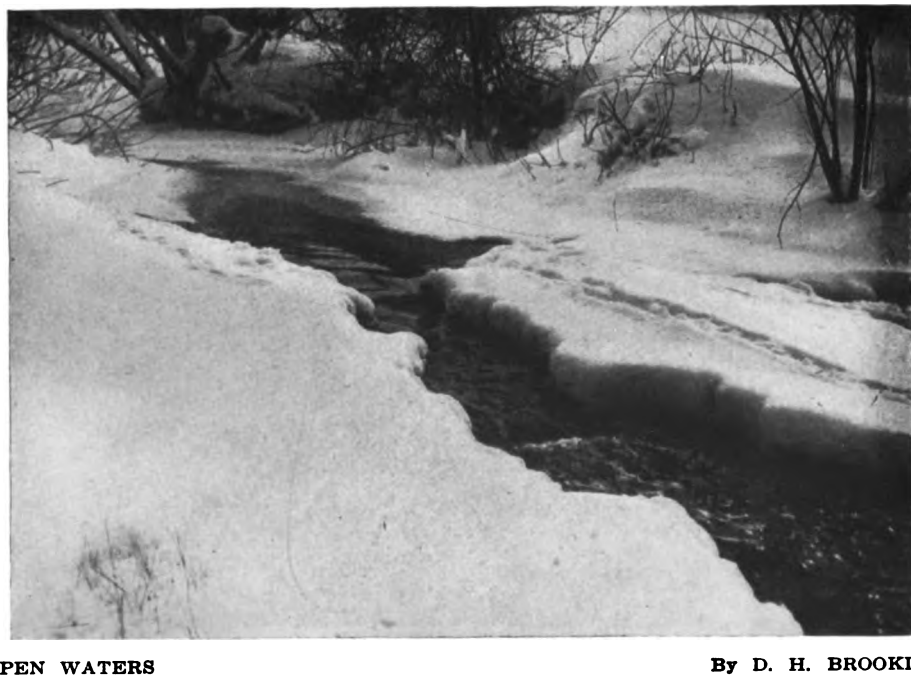
regular photograph gallery here in Leon. Today my pictures are in nearly every home in the city, and I am known, at least by sight, by every man, woman, and child in Leon. My striking resemblance to the lanky pictures of Don Quixote, aided by a Buffalo Bill mustache, insures this last.

The climate is an ideal one from a photographic point of view, being never too cold in winter or too hot in summer for the developing of plates. In fact, the climate is as fine here as anywhere in the world. The rainy season starts about the middle of June and continues until October, and everything is "just perfectly lovely." Rain falls nearly every evening, but the mornings are always bright and clear. There is never any trouble in finding good printing light.

My work, as far as operating is concerned, all comes in the forenoon. It seems to be the custom of the people, probably on account of the afternoon rains, to do their shopping early in the day. I like it, anyway, as my afternoons, used for finishing, are uninterrupted.

Nearly every girl or boy, after their first communion, has pictures taken, and such work often runs into large groups, with the first communicant as a central figure. Marriages always put joy into the photographer's heart, as they always want large work and several positions and styles, and then a big group of all. The people are demanding better and larger work each successive year; business, in consequence, is improving all the time.

Should this reach the eye of any photographer suffering from asthma in particular, or any old tired feeling in general, let him get an immediate "wiggle on himself" and pay this grand old table-land a visit. He will never regret having done so.



OPEN WATERS
26

By D. H. BROOKINS

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

AN EASIER WAY: Referring to the article, "An Easier Way With Roll Film," in the November issue, I find the same idea very convenient in fixing my films that have been developed in tanks; so the suggestion should interest the tank-users as well as those who develop their films in a tray.—W. M. C., Georgia.

CLEANING THE RUBY GLASS: The ruby and orange glasses of the ordinary oil or candle dark-room lamp get very dirty, and you all know how persistently that oily dirt seems to stick. An effective and easy method of cleaning them is to use a small pledget of cotton wool saturated with alcohol or benzine, afterwards polishing with a dry cloth. I have found nothing else so effective.—P. A. F., Montana.

A TRIPOD POINTER: A tripod is liable to be tricky on a hardwood floor or other smooth surface. Besides, it scratches the surface of the floor, and that is not always appreciated by the owner. I had trouble with mine slipping about and making scratches, until I read of somebody who made a practice of clapping a good-sized piece of cork on each tripod point whenever there was a tendency to slip. Now I take corks whenever I expect to encounter slippery places. There may be a better method, but I doubt if there is anything suitable that is easier to apply.—E. M. H., Wisconsin.

BROWN TONES: Warm black and brown tones on developing paper are secured as follows: After fixing and well washing, the prints should be bleached in:

Bichloride of mercury	90 grains
Hydrochloric acid	1 drachm
Water	3 ounces

After bleaching, wash the prints thoroughly and immerse in:

Regular combined toning and fixing bath	1 ounce
Water	8 to 10 ounces

Wash well and dry.—Catcus, Oregon.

A CHEAP MEDICINE,—BUT VERY EFFECTIVE: Every one of us, us who have given years of close attention and application to business with its attending wear and tear, know full well that there comes a time when we become nervous, peevish, and ill. We cannot conduct the day's work with anything like the usual "our own self" style. R: Buy a wood saw and a saw buck; get a quarter of a cord of oak wood, and "go to it." Try a stick or two at first; you'll soon be able to dispose of several; and shortly you'll be "your

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own self." Just now I dispatched two cords and feel like a youngster. Am only a little sore. That is how nicely it worked with "Old Forty," California.

USING MAGNESIUM POWDER: One is sometimes unable to secure his favorite flash powder, but pure magnesium is always obtainable. There is a simple method of using the latter that is well worth remembering. Take a strip of stout paper about a foot long, wrap it about a lead pencil, and then wind around this a short length of cotton or string to keep it from unwinding. Slip out the pencil and you have a blow pipe. Take a piece of cotton wool, saturate it with kerosene or coal oil, and place it on a tin plate or piece of board. Load the powder into the end of your improvised blow pipe, light the oil on the cotton wool, and blow the powder through the flame to make the flash.—Short O'Cash, B. C., Canada.

WASHING PRINTS: The authorities tell us that passing prints from one tray to another, changing the water each time, washes them more thoroughly than does letting them lie closely together in a flowing stream, or even allowing them to be swished around in a more violent current of running water. In one case the water cannot get to the entire surface of many of the prints; and, in the other, the prints travel with the water, and that does not result in much washing. But handling prints from one tray into another is rather trying on the back and lower limbs, particularly if the table or sink on which the trays are placed be a little low. To overcome this, place two chairs facing each other and about three or four feet apart. Then place a board from one seat to the other, and in the center of the bench so made, place the two trays. You can then seat yourself at one end of the board and handle the prints with a degree of comfort that will be appreciated. Try it and see.—Dot Pussy, New York.

PLAIN FIXING BATH PREFERRED: All the photographic literature that I have ever read gives preference to the acid-alum fixing bath. But there are cases in which a plain fixing bath, one made of hypo and water only, is far superior to the acid bath. If it is desired to block off a portion of a negative with opaque, use plain fixing bath; the acid bath is almost sure to make the opaque scale and peel off in spots. In making lantern slides that are to be colored with water-colors, use plain fixing bath. If acid bath is used it will destroy the colors, and work badly in every way. To avoid punching holes through the film with the brush, while working the color, the slides should be hardened in a solution made up of: formalin one part, water eight parts. Immerse slides in this for two minutes; wash for fifteen minutes, and then dry. Slides so prepared take the color perfectly. If an occasional negative has to be reduced or intensified, the advantage is all with the one fixed in plain hypo and not hardened. In my experience I have never found an acid bath any better than a plain bath for plates, but it may have its advantages with paper.—"Smudge," Ohio.

USING OLD BROMIDE PAPER: I have a lot of old bromide paper that I am using for all my nice work. It is so old that it is impossible to get pure whites by any of the ordinary methods. It simply shows fog all over shortly

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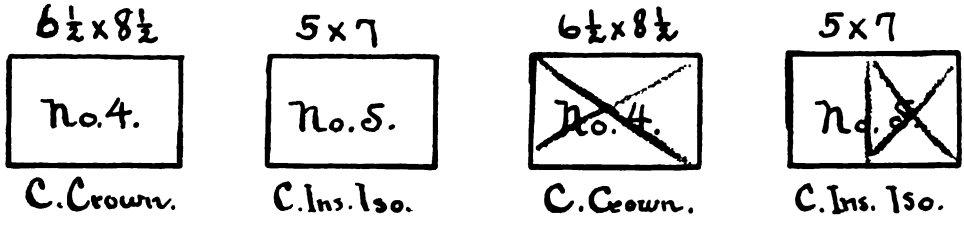
after being placed in the developer. But I have no trouble in getting pure whites, thusly: I print about one-fifth longer than necessary, develop until the usual fog appears, fix, and then immerse in a weak solution of potassium ferricyanide, or, as it is commonly called, red prussiate of potash. This completely eliminates the fog, reduces the over-printing, and clears up the print perfectly. I follow the same plan when I have a flat, over-exposed negative. A print of good contrast can be obtained in this way when all other methods fail. The hypo carried into the ferricyanide solution by the prints will decompose the latter quite rapidly, so new ferricyanide solution must be added from time to time if a number of prints are being treated. On the other hand, it should not be made too strong or the reducing action will be too rapid to be under good control.—G. P., Tennessee.

A CONVENIENT RECORD: The worker who uses kits and carries out different sizes, or carries out different kinds of emulsions, as well as the one who makes two or more exposures on the same plate, sometimes has difficulty in keeping track of the different plates and exposures in his holders. He sometimes finds himself in doubt as to what a certain holder contains; and, if some time elapses between exposing and developing, he is again at a loss to locate certain exposures that he may want to develop differently. My plan is as follows: I use a small memorandum book, and, when filling my holders, I make a rectangle for each plate, numbering them to correspond with the num-



ber on the holders, and place the size of the plate above and the name of the plate below. The drawing below shows that Number 4 holder contains a 6½x8½ Cramer Crown, and Number 5 holder a 5x7 Cramer's Instantaneous Iso. As the plates are exposed, these rectangles are crossed off as shown at the right, Number 4 plate being represented as exposed wholly, while Number 5 plate has only the right-hand half exposed. These rectangles are placed along the edge of the leaves in the note book; and, when crossing off an exposed plate, I fill in the data concerning that particular exposure on the blank lines opposite. By this method of checking one can always tell just what plates are exposed, and what kind and size they are, be it two days or two months later when one comes to develop them.—B. T. F., Oregon.

TWO FIXING BATHS: For the past four or five years I have used, for my plates and films, a fixing bath compounded as follows:

Water	128	ounces
Hypo	38	ounces
Sulphite of soda (crystals)	2	ounces
Oxalic acid	½	ounce

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I mix one gallon at a time, about every five or six months. It always stays clear, and I am never bothered with frilled or stained negatives.

For fixing prints I make up a stock solution of hardener as follows:

Water	16 ounces
Sulphite of soda (crystals)	1½ ounces
Acetic acid No. 8	10 ounces
Alum (powdered)	1½ ounces

When wanted for use, I mix up the desired amount of fixing bath by adding one ounce of hypo to every five ounces of water; and then, to this I add one ounce of the above hardener to every pint of the hypo solution so made. This gives me an excellent fixing bath and without the trouble of weighing out and dissolving the ingredients of the hardener each time.—H. L. D., Pennsylvania.

A GOOD DEVELOPER: The following developer I have found to be very suitable in dealing with rapid exposures. It gives density without clogging the halftones, and with a great deal of transparency in the shadows.

No. 1:	Erogen	3 grams
	Metabisulphite of potash	7 grams
	Pyrogallic acid	3 grams
	Bromide of potash	1 gram
	Distilled or boiled water, to make	500 cubic centimeters
No. 2:	Carbonate of Soda (crystals)	100 grams
	Distilled or boiled water, to make	500 cubic centimeters

In making up No. 1, take two hundred cubic centimeters of water and dissolve your erogen in it, and use one hundred cubic centimeters of water to dissolve the metabisulphite separately. When both fully dissolve, add them together and dissolve therein the pyro and bromide, lastly adding enough water to make five hundred cubic centimeters. Dissolve the carbonate in three hundred cubic centimeters of water, and when fully dissolved, add enough water to make five hundred cubic centimeters. For use, take thirty cubic centimeters of both solutions, adding from thirty to ninety cubic centimeters of water. Use the more dilute solution for great underexposures.—G. P. F., California.

JUDGING EXPOSURE BY THE GROUND GLASS: I was advised, at the beginning of my picture taking, to study the ground glass as a means of judging the required exposure. I followed the advice and find so doing even better than using a meter, after a little practice has made me proficient. I know from experience that a certain amount of brilliancy of the image, as seen on the focusing screen, will permit an exposure of a certain brief duration. If, with the lens stopped down to secure the desired depth of focus, or working in a light that is poor, the image is less bright, an increased length of exposure is required, according to the diminution of the illumination. It is a very easy matter to learn to distinguish the varying amounts of illumination necessary for different lengths of exposure. The appearance of the ground glass is an unfailing measure of the amount of light that will reach the plate. However, there is one factor that must be taken into account. When one is working inside a room where the illumination is not good, the eye accommo-

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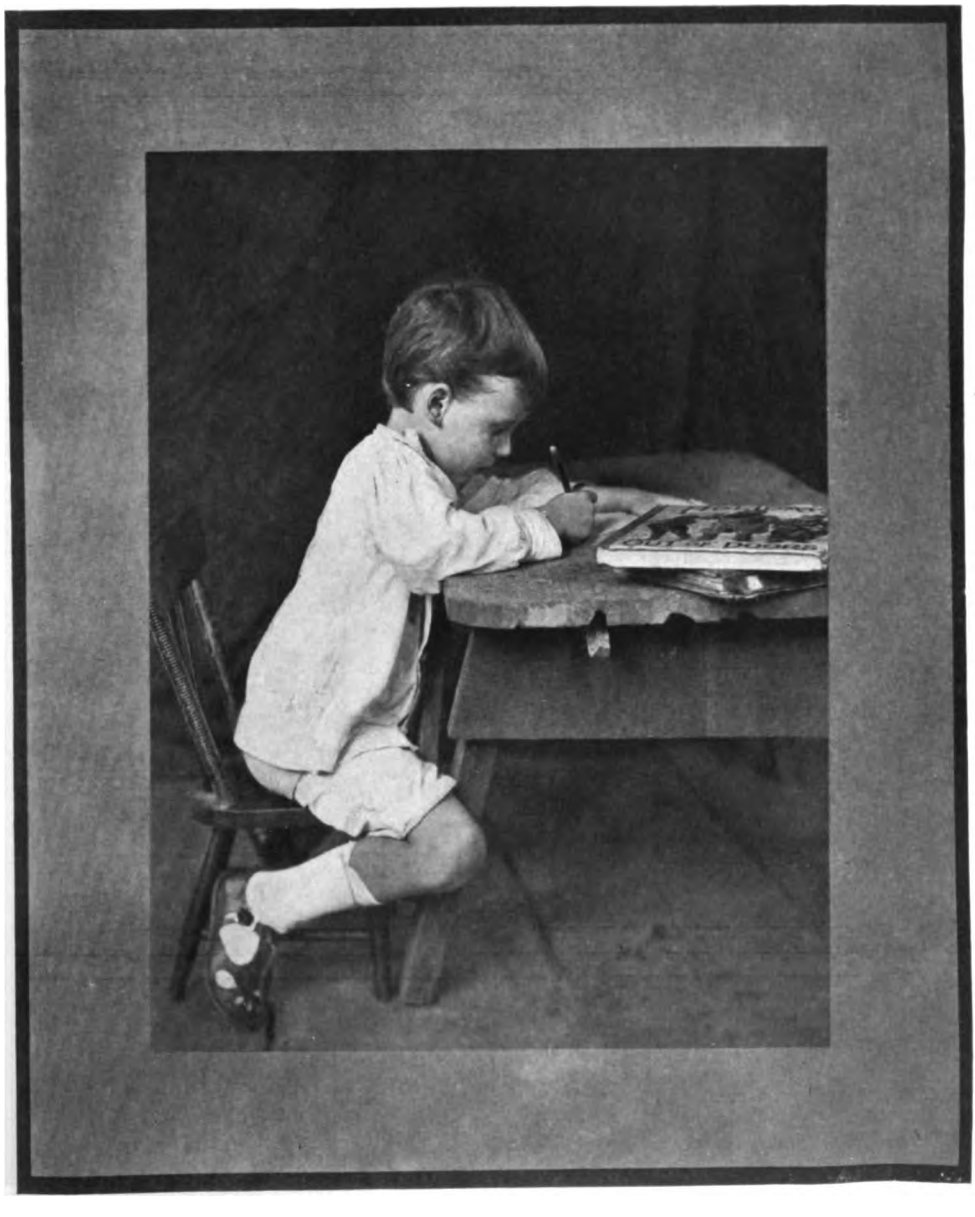

THE FIRST LESSON
By JOHN PARPAL, Jr.

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dates itself to the decreased light and the image on the ground glass will appear brighter than it really is. On the other hand, the eye accommodating itself to strong sunlight outdoors, if the head be inserted under the focusing cloth, or the eyes placed at the hood of a camera of the reflex type, the image on the ground glass will at first appear less bright than it is in reality. This variation in the apparent strength of the image, due to the accommodation of the eye to the light around it, must be taken into consideration or one will find himself slightly under-exposing interior subjects; a class, by the way, that will stand much more exposure than is generally given.—W. M., Minnesota.

THE STOPS ON A REFLEX: On most cameras of the reflex type the lens is mounted well inside of the box and it takes some time to get it out or into a position where the stop numbers opposite the diaphragm ring may be read. To overcome this difficulty I mounted a small mirror, 1x2 inches, inside the hood and opposite the numbers, but at an angle with the lens barrel. So equipped, the stop numbers are plainly seen from the front, being reflected in the glass, and the diaphragm ring can be instantly set at any desired stop. Without it, using my long focus reflex, it takes two or three minutes to remove the lens, set the stop, and replace lens. The device is very practical and a great convenience to the worker who does not wish to guess at the size of the stop in position.—J. B. W., Illinois.

BLUE PRINT PAPER: A blue print, a good blue print, particularly if the subject is one that looks well in blue, is a thing of beauty, besides adding variety to one's collection. I make my own blue print paper and find it far superior to any ready prepared paper I have been able to purchase. The sensitizer is made up in two solutions, as follows:

A. Potassium ferricyanide (red crystals).....160 grains
Water ..... 4 ounces
B. Ferric ammonium citrate (green scales).....440 grains
Water ..... 4 ounces

When ready to coat the paper, take equal parts of A and B. Coating is best done with a brush made by wrapping a strip of canton flannel around a 4x5 glass plate and fastening the loose end with a rubber band. If strong prints are desired, coat heavily, of course being careful that the sensitizer does not remain on the paper in streaks and cause unevenness. As to paper, Whatman's is fine, does not need sizing, and gives magnificent prints. Many sorts of ledger and other kinds of writing paper are suitable. As to chemicals, be sure to use the green scales of the ferric ammonium citrate. It can be procured of Merck & Company, New York, and of many dealers. It should only be bought in one or two-ounce bottles, as that sold in bulk is too often quite unsuitable. It only costs about fifteen cents an ounce, gives a much deeper blue, and prints more quickly than does paper prepared with the brown scales of iron and ammonia, as recommended in the old formula. The process is very cheap, easy to work, and, for many subjects, very beautiful.—N. B., Connecticut.

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PARAGRAPHS PHOTOGRAPHIC

A NEW USE FOR POTASSIUM IODIDE: The little booklets, issued by various manufacturers of photographic papers, will tell you that the addition of six to ten grains of potassium iodide to each ounce of stock developer will prevent abrasion marks on glossy paper; and, also act as a guide to fixing, as the print leaves the developer with a yellow color which entirely disappears when the print is thoroughly fixed, and not until then. This has been a source of great satisfaction to me, the knowing positively that my prints are fully fixed, for sometimes I carelessly let my hypo bath get a little old, especially when turning out commercial work, but with the iodide I can be sure that the fixing is complete.

However, it is not always practical to use iodide, as it increases the softness of the emulsion and does not give good color with certain papers. So I have fallen upon a scheme. When using papers that do not take kindly to iodide in the developer, I add, when the last print has been placed in the hypo, a little iodide to the used developer and immerse a small piece of unexposed paper in it, leaving it about thirty seconds or until it becomes yellow, when I put this piece of yellowed paper in the fixing bath along with the prints. When the yellow has disappeared from this test piece I know that the prints are fixed if they have been kept well separated.—S. O. B., New York.

MY FIRST EXPERIENCES: Just to keep this new department from being too "advanced," I would offer the following: Some years ago I went to a second-hand dealer and bought a 4x5 camera and some loaded plate holders, fully determined that I would go out the next day, the Fourth of July, and celebrate, not with firecrackers, but by making some excellent pictures. I first wanted to get the whole city of Minneapolis on my 4x5 plate, so I went to an elevation that commanded a view of the city, and made my first snapshot. It was a failure, I found out later. The next was a farm house, but the results were not much better. However, experience taught me what to aim at and what I could achieve, and I believe I can offer a few words of advice. I would suggest, for the beginner, a 4x5 folding camera, one that will take either film-pack or plates. Plates are cheaper, and, if you only intend to take a few pictures on a day's outing, the two or three holders are not inconvenient to carry. If the trip is to be of longer duration or more exposures are contemplated, a film pack, or several of them, seems more advisable. A camera using roll film has its advantages; it is very handy and convenient, but if one does not intend to do more than take a few snaps now and then, a plate camera will be the best. And when you start out, do not try, as I did, to get too much on your plate. A vista, taking in miles of country, may look very pretty to the eye, but crowded into a space of 4x5 inches, it is disappointing. Try some small portion of a pretty landscape close at hand; anything that looks good in the finder. And one more suggestion: If you do your own printing and developing of the prints, keep your developer cool in hot weather and you will avoid a lot of trouble with brown or rusty spots. I lost a great many prints through that fault before I discovered the cause. And lastly, if at first you don't succeed, try, try again.—A. A. A., Minnesota.

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USING OLD ARISTO PLATINO: Some years ago I leased a studio in the South; and, in the deal, acquired about twelve gross of Aristo Platino, so old that it had turned a deep coffee color. I tried to use it for proofs, but it was too dark for that. However, in printing a sheet one day, I forgot the frame while attending to a customer, to later find the print completely bronzed. I threw it into my Carbutt's fixing bath, an acid, chrome acid one, and did not fish it out until two days later. To my surprise I found that it had cleared up perfectly and was a beautiful red print with clear whites. As a further experiment, I placed it in my gold toning bath, from which it came out a fine, purple brown. I quickly used up the balance of the lot on some of my best work, not losing a single print, as I found I could make a good print from any degree of over-printing by simply varying the length of time in the acid alum fixing bath.—G. P., Tennessee.

A POST CARD MASK: To the camera worker, who uses 5x7 plates, and makes two exposures on the plate, the following method of making and using a mask for neat white borders on post cards or other prints, may be of help.

After the plate has been developed, fixed, washed and dried, cut each negative in half, using a glass cutter and straight edge. We now have two negatives, which are 3½x5, and as a post card is 3¼x5½ in size, it will readily be seen that the negatives would not print well, using them as they are. To offset this inconvenient size, take a piece of heavy cover paper, or any medium weight opaque paper, and cut it 7¼x3⅞, as shown in Fig. 1. Using a sharp pencil and ruler, lay out a rectangle 3x5¼ in size, Fig. 2, one-half inch from one end of the sheet. After the rectangle has been laid out, cut it out with a sharp knife and straight-edge. A straight piece of glass will do for the straight-edge, providing the edges are smooth. Care must be taken in doing the cutting, as ragged edges on the mask mean fuzzy borders on the cards.

After the rectangle has been cut, take the straight-edge and a bone folder, and laying the straight-edge one-quarter-inch from the end having the narrowest edge, draw the folder along the straight-edge beneath the paper, so that a fold is made, as indicated by the dotted line in Fig. 3. The end will now stand at right angles to the rest of the mask. The mask being ready for use, take a clean piece of 5x7 glass; insert it in the printing frame and place the mask on the glass, the fold at the top butting against the top of the frame. The 3½x5 negative is now laid on the mask, the top edge also butting against the top of the frame. It will now be seen that the mask extends well beyond and below the negative, thereby protecting all of the card not being exposed through the negative. The card is placed on the negative, the top of the card butting against the top of the frame. The back is now inserted and exposure made.

The use of this mask will give straight, clean, parallel edges and true square corners. It also allows a saving of time, as a card can be inserted in the frame in less time than where a loose mask has to be adjusted. Using this mask, with an average negative, I have printed and developed ten prints in ten minutes.—J. E. S., Iowa.

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THE TURNPIKE By F. BELMONT ODELL

"Readin' The Pictures"

By Chas. M. Smyth

The title of this little article suggests itself to me as I recall an incident away back on the farm, when I was what might have been termed the milk boy. Among other things, it was my duty to drive to and from town every morning, and take half a dozen or more cans of milk and cream to the milk depot. On my return trip I always brought the mail, as we then had no rural delivery. On this particular morning, as I drove up the cool, shady drive, and passed the house on the way to the stables, I dropped the bundle of papers and letters on the large platform by the kitchen.

Little Sammy was a pickaninny, the son of the negro couple that lived in the shanty back by the garden patch and made themselves generally useful about the farm. Sammy was sitting upon the edge of the platform, shelling peas, as I dropped the mail beside him. He at once espied an illustrated magazine; and, setting his pan of peas aside, picked up the magazine and commenced to look through it. I unharnessed the horses at the barn; and, as I led them up to the watering trough by the well near the house, I noticed Sammy was still looking at the illustrated magazine. It was then his mother called out from her place in the kitchen:

"Sammy! drop that 'ere paper, and git done shuckin' them peas."

"I'se a readin', mammy," retorted little Sammy.

"Gwan now chile. Do as I say. You all knows you kain't read."

"Yes, I kin, mammy; I'se readin' de pictures."

It struck me as being very funny then; but, as I have thought about it many times since, I have come to the conclusion that maybe he was "readin' the pictures," and no doubt getting wisdom from them. It impresses me that most of us are taught, in our early childhood, how to read and understand the con-

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struction of our language. But how many of us are ever taught how to "read the pictures"? We may pick up the works of almost any noted writer and derive therefrom the picture he has intended to portray, the detail of which will be limited only by the ability of the writer and the vividness of our own imagination. But to absorb the detail in such a word-picture, we must read carefully every word of the writer, and not simply glance at the page in general and expect to understand the story.

It is likewise with a picture. If one simply glances at it in general, taking note, perhaps, that it may be a picture of this or that, to lay it aside quickly without searching out the detail and devouring every portion of it, how can he expect to discover its value any more than he could with the word-picture, should he do likewise with it? Of the many different kinds of pictures, photographs, perhaps, possess more detail than any other. And it is indeed a very poor photograph in which one cannot, by careful scrutiny, find a great deal to interest and hold the attention.

Learn to read your photographs. You will find as much variation in their messages as you do in books; and, with many photographs, either of your own taking or those taken by others, you will discover that you can spend hours, perhaps, over them and still reap enjoyment. Not until you have learned to "read the pictures" will you find what an enjoyable art photography really is.

"The Birds of California"

A magnificently illustrated work, to be entitled "The Birds of California," is announced. W. Leon Dawson, of Seattle, who, with J. H. Bowles, of Tacoma, prepared the beautiful de luxe volumes upon "The Birds of Washington," has come south to assume the editorship and management of the new enterprise, which is to be conducted under the auspices of the Cooper Ornithological Club of California. Mr. Dawson's work in ornithology has received the highest praises from the reviews, both at home and abroad, and California is to be congratulated upon securing his services for this work, which promises to surpass all previous efforts. Of particular interest to the readers of CAMERA CRAFT is the fact that the proposed volumes are to be lavishly illustrated by every approved process known to the photographer's and photo-engraver's art. The Patrons' Edition, De Grand Luxe, is to contain not only photogravures and four-color halftone plates, but engraver's proofs and original photographs in the text; besides full-page photographs and bromide enlargements in bewildering array. If the plans of its projectors are carried out, "The Birds of California" will appear simultaneously in six editions, differing among themselves in paper, press work, and binding, as well as in pictorial equipment.

The management of the new undertaking is desirous of getting into touch with those who are interested in bird photography, and invites the co-operation of camera workers throughout the State. Mr. Dawson will make his home in Santa Barbara, where he will be glad to open correspondence with all bird and nature lovers. We trust that all our California photographers will do what they can to assist.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, JANUARY, 1911 No. 1

Shop Talk

When we first used the name, "Shop Talks," in our October editorial department, it was our intention to later cast about and find something that was a little more descriptive of what we had in mind, but the name seems to have suited our readers, judging from the responses, so we will allow it to stand. In the matter of the new department, items have come in in such a flood that only about one-fourth of them can be used in the January issue. While we feared there would not be enough to start the department as we wished, we are now only afraid the gratifying supply may diminish. We have asked the printer to figure on eight more pages, and, finding we can afford the expense, will have more room. Then the new department will be allowed to spread itself over a number of pages if the material comes in as we feel sure it will. In the future, the contributor's name will be used, except as he may ask that a non-de-plume, or initials only, appear. The other new department, the one devoted to stereoscopic photography, owing to the proportionally small number who have learned to appreciate the beauty of that kind of photographic work, will not be allowed to take up too much room, although it is hoped that there will be at least two pages each month. Our series of articles on professional photography seem to be appreciated more and more as they progress. Nearly all of them have been reprinted by the leading professional journal of England, some of them have been translated into other languages for other foreign photographic magazines, and we are constantly receiving requests for the back numbers containing the complete series. When we started to publish these articles we were somewhat afraid that our amateur readers would demur at so much space being given, regularly, to matters of special interest to the professional. Unless we are greatly mistaken, after trying it for a whole year, the result is just the opposite. Many of our amateur readers are interested in just such matters. They form their own opinions as to why this professional achieves success, why that one fails, and they find these articles particularly interesting on that account. Quite a number of correspondents, in telling us what they like about the magazine, have gone on to say that these articles were about the most interesting they had ever read, despite the fact that they, the writers, were not professionals and were not even interested in portraiture as amateurs. But the one thing that has surprised us most, in these comments made by our readers, is the importance so many of them attach to the practically complete directory of the photographic trade that our advertising pages provides. One correspondent writes that owing to his isolated position he is compelled to do most of his buying by mail. During the past year he has had

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two unfortunate experiences in so doing; and, in both cases, with parties not using our advertising pages. He wants to know whether this is simply a coincidence or the result of our close censorship of our advertising pages. The most likely explanation is that it is neither, but the result of a well understood principle in advertising, namely, that it does not pay to advertise an unsatisfactory article continuously in magazines and other publications. If an advertisement appears regularly and uninterruptedly in the pages of a reputable magazine, it is safe to assume that the article advertised has sufficient merit to justify its purchase by those who require such an article. It is also perfectly safe to assume that the firm so advertising is giving its customers that degree of attention that will command their repeated orders and continued good will.

She Looks "Too Old"

In our leading article this month, Mr. Eddy advised his brother photographers, or rather, the younger brothers to whom his article is addressed, to make every patron, particularly the ladies, look as nice as possible. This is advice with which some of our readers will quarrel, no doubt. We are told, from time to time, that the "egg-shell finish" does not represent the faces of the sitters. We are warned that excessive retouching is destructive to likeness, and occasionally a sitter will make a protest, after the pictures are safely delivered, that sounds the same objection to the improvement that has been made. But, the Chicago papers of a recent date give considerable space, under the same heading that we have used above, in commenting upon a suit brought by M. J. Steffens, to collect seventy-five dollars from Mrs. Helen H. Robeson, of Lake Avenue, Chicago. "His pictures make me appear like an extreme brunette. I am twenty-one, and in the pictures I look thirty-five. I won't pay for them unless the court decides that I must," the lady is quoted as saying. It is, of course, highly unlikely that Mr. Eddy's well stippled portraits would have much of a chance of winning a prize at the National Convention; in fact, Mr. Eddy is not, in his article, telling how to make convention work, although he could, no doubt, produce work that would stand a very good chance in any convention. But the point we wish to bring out is one that the younger men are too apt, in their enthusiasm and their desire to learn, to overlook; namely, that convention work is not always the kind that is made in the regular order of business. The experienced photographer makes negatives to fill his order, and then makes one or two of the selected subject, "for himself," or "for his display," and if his anticipations are realized with these last, one of them may find their way into his convention exhibit. This is the procedure, perhaps not in every case, but often enough to mislead, unintentionally, of course, the younger man who looks to these exhibition pictures from the hands of the masters as examples to be followed. We are blaming no one; rather, we believe that every effort should be made to cultivate, if possible, a taste for better work, and this the convention pictures certainly do. But we do wish to advise caution on the part of those who may be inclined to think Mr. Eddy is wholly wrong. Mr. Steffens' clientele is one that any professional photographer would be glad to claim; and yet, the case mentioned above is not the only one in which he has failed to please his sitter; the same

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article making mention of another suit to collect eighty dollars from a lady who claims that the prints were made from the wrong negatives. When we are able to record the fact that someone has refused to pay for their photographs, "unless the court decided that I must do so," on the ground that the photographer had made them appear too young, we will be ready to discredit Mr. Eddy's advice and urge all photographers to quarrel with their bread and butter to their heart's content.

The Little Portrait

Let us make a plea for the little portrait; not altogether on the theory that a small evil is less to be dreaded than a large one, but for some other reasons that seem to be sensible. Mr. Thomas W. Dewing has set an excellent example of the size of canvas we have in mind; and, incidentally, he fills these small spaces with intelligence, skill, and charm, producing sometimes the little portrait, and always the little picture that will represent everlastingly the very best of the art of these present days. The little portrait, really, is less to be dreaded than the big one. You can get away from it; you can hide it; you are not obliged to suffer poverty by the necessity of building a house quite beyond your means to accommodate the life-size, full-length counterpart of your insignificant self, which, arriving fresh from the hands of the painter and gilder, makes your hitherto satisfactory walls and carpets and furnishings look mean and poor and inadequate.

The next time you go to Paris, kind reader, go out to Chantilly, and after you have fed the old and greedy carp, and watched the keepers exercising the great pack of splendid hounds, and after you have walked about the lovely grounds of the Villa, go inside and you will find some of the little portraits whereof we speak. We mention these few portraits at Chantilly because coming upon them unexpectedly, one is likely to carry away a more lasting impression than one is apt to get in the Louvre or in the other great galleries where the little portrait is cast in the shade by its great and world-famous neighbors. You will see at least three small equestrian portraits—each not more than eighteen inches high—one of the French King, Henry III, and two of noble dukes. There they are, men and horses, in all the style and splendor of their day and generation; faithful likenesses you know them to be, and highly characteristic in costume and color and pose of the men and times. They are very noble little pictures, and, curiously, you no longer think of their size when you recall them, but your mind is filled with the bigness of the way in which the école française handled these difficult themes. And there are more little portraits at Chantilly—paintings and drawings of about the same size, of men and women once famous, some from French and some from Flemish hands, and always very charming indeed. And, sometimes, one wishes that it were more the vogue in these latter days to set down thus the features and forms of our family and friends. And, finally, may one venture the hope that the little portrait may flourish and wax great in the artistic land which is being so busily cultivated in this new century?—"Academy Notes."

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

DIRECT SEPIA TONING

This subject received some prominence and importance of late; Dr. F. Kropf giving a recent report in the *Photographische Kundschaw* on the subject of single toning baths for bromide prints. It is unnecessary to report the chemical changes involved, as these are in dispute; but, according to the writer, his investigations promise a one solution toner, prepared as follows:

A:	Ammonium sulphide commercial	200 ccs.
	Water, to make	8,000 ccs.
B:	Ammonium bicarbonate..	30 gms.
	Water, to make	1,000 ccs.
C:	Potassium persulphate ..	10 gms.
	Water, to make	1,000 ccs.

These solutions, A, B, and C, are mixed in the above order.

After making up the bath, the latter is allowed to stand for about half an hour, during which time the somewhat greenish yellow color passes into one of golden yellow. Any slight turbidity due to separation of sulphur practically disappears during this time.

The prints do not require to be washed with any particular care before toning, since the persulphate itself destroys the remaining traces of hypo. In the case of a glossy paper the time of toning at sixty degrees Fahrenheit is about fifteen minutes. With a paper of the same kind, but rendered matt by addition of starch to the emulsion, the time of toning at sixty degrees Fahrenheit is twenty-five minutes, whilst at eighty-five degrees Fahrenheit the time of toning is ten minutes.

This led to investigations by the *British Journal of Photography*, and they evolved a method not requiring the use of an oxidizer. In their own words they say:

"A few rough and ready trials of strong solutions led to the following bath: To two ounces of twenty per cent soda sulphide solution we added one ounce of twenty per cent potassium ferricyanide and stirred until the solution became clear. One ounce of ten per cent potassium bromide was then added, and finally a quarter of an ounce of acetic acid. The last addition again produced a strong precipitate which speedily disappeared on stirring. A well soaked bromide print was then immersed in this solution, and in ten to fifteen minutes an extremely fine brown tone was reached. We varied this experiment by using an excess of ferricyanide. This produced a permanent yellow cloudiness. We then added some hypo to introduce a solvent. The bath then seemed to act rather more rapidly, and it eventually produced a very rich, dark brown tone.

"In both cases the results were far better than any we ever expect to get with the usual two-solution process working at its best, and, therefore, we think the mixture of the two solutions is to be recommended, though the exact best formula can only be determined as the result of further experiment. We can, however, point out that an excess of hypo must not be added, otherwise silver is dissolved too rapidly and is precipitated in the dish in the form of black sulphide. The bath containing hypo seemed to work best in an alkaline state, ammonia being added in our tests, whereas the bath without hypo appeared to work best when acid."

The above called forth a letter from R. E. Blake-Smith, the inventor of the two solution toning process, now in general use. He says:

"Now, I can give your readers a solution which will sulphuret bromide prints very readily, acting in quite a different way to Dr. Kropf's or your solutions. By substituting hydrogen sulphide for an alkaline sulphide it is possible to get a solution containing both a sulphide and an oxidizing substance without the two acting anything but slowly on one another.

"Let one hundred minims of a twenty-five per cent solution of pure crystalline sodium sulphide be added to five ounces of water,

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and then let thirty minims of concentrated sulphuric acid be stirred in. Add this solution to five ounces of the ordinary ferricyanide-bromide bleacher, viz:

Potassium bromide .... 75 grains.
Potassium ferricyanide ..... 75 grains.
Water ..... 5 ounces.

and we get a solution which will very quickly tone any bromide print. I doubt not that the action consists in the formation, first, of silver bromide, and then, in its subsequent sulphuration, the two actions proceeding practically simultaneously. The action is too quick for nascent sulphur to be looked on as the cause, although I suppose nascent sulphur is formed in the solution. The tones produced are somewhat darker than those given by the indirect method.

"From Dr. Kropf's remarks I should say that the action of this solution is far quicker than his always, and that the velocity of the toning reaction and the quality of the tone is far less likely to be influenced by different molecular conditions of the silver image.

"The new direct solutions are certainly easier to work than the hypo-alum bath, and, as they seem to give us tones other than the indirect method does, are very likely to be considerably appreciated in the future.

"I certainly don't for one moment believe that they are likely to supersede the indirect method. In my opinion, the tones given by the indirect method are, when the emulsion is suitable and when a 'correct' exposure and full development has taken place, the finest given by any sulphureting process. There are on the market papers of all grades giving splendid tones with full development. Of course, it is unfortunately true, as I originally pointed out, that where, owing to the hardness of the negative (N.B.—Don't make hard negatives), the print has to be over-exposed, and development stopped well before completion, the tones are too yellow. I must remark, however, that the hardness of a negative is not really an absolute thing. The character of the negative depends, as far as its printing qualities are concerned, on the nature and intensity of the light used for printing. By varying the light we can, as a rule, do away with the necessity of over-exposure and incomplete development.

"The difference of tone between the completely and incompletely developed print is due to the silver sulphide, as was the original silver, being in a different molecular state in the two cases. It may be that in cases where the indirect method does not yield good results the new solutions may do so. In such cases, and also, as I have said, since they give us other tones, they may be very useful, but I don't believe that they will ever prove so convenient to work or so certain in action as the indirect method.

"Dr. Kropf says the indirect method calls for a careful method of working. Well, of course, all photographic processes want some care, but to me it seems that if ever there was a process absolutely 'fool-proof,' the indirect sulphide toning method is that one. Obtain pure crystalline sodium sulphide for your sulphuretting agent and the rest is simplicity itself."

The Rajah Company in a circular give yet another procedure, the excellence of which I can confirm from personal experience. They say:

"It is generally acknowledged that while the sulphide method of toning is satisfactory with bromide prints, it is not so successful in the case of gaslight papers. The objection to its use for gaslight papers is that the tones are usually of too yellow a tone, the color being more of a yellow-brown than the sepia so much desired. We have found that this objection can be removed by a slight modification of the sulphide process, entailing practically no extra work, which we have pleasure in describing below.

"We may also mention that bromide prints treated in the same manner yield darker brown tones than usual, and the process is particularly valuable in the case of bromide prints that have been rather over-exposed, which, as is well known, have a tendency to give yellowish-brown tones when treated by the usual process.

"The fixed and washed prints are immersed in the following solution:

Liquid ammonium sulphide .. 2 ounces.
Water ..... 80 ounces.

and allowed to remain about five minutes.

"No change, or very little, will take place in the appearance of the prints, but a portion of the silver will have been converted into sulphide. The prints are then washed and bleached in the following:

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Potassium bromide	3 ounces.
Potassium ferricyanide	3 ounces.
Water	80 ounces.

It will be found that the prints will not bleach as completely as usual, a weak black image still remaining. It is this weak black image that gives the darker-toned print afterwards.

"The prints are then rinsed in two or three changes of water, and placed again in the sulphide bath given above, when the full tone is developed and the process finished. The prints are then washed and finished as usual.

"It will thus be seen that the process consists in using the sulphide bath, both before and after bleaching, and although formulæ have been given, any other formula will answer the same purpose, providing satisfactory results are given when used in the usual way.

"We may mention, however, that in our experience the use of ammonium sulphide is always preferable to the sodium salt; the latter being very erratic in its action as well as being more expensive."

In a letter to the *British Journal of Photography* they suggest another method of obtaining dark tones, namely, to return the print after bleaching to a very weak developer, one to eight, and when the image has faintly appeared, complete development with the sulphide solution. I have had experience in this procedure for the past two years, in connection with my method of printing in two colors, and I cannot speak enthusiastically of it. I have found it very difficult to redevelop back, evenly, to the exact amount that shall yield an evenly modified brown, when completed with the sulphide. In my experience it is easier to get definite results by the addition of small quantities of sulphide to a normal developer.

W. D., in *Photography*, makes a plea for ammonium sulphide as the sulphureting agent. He states that the unpleasant odor is easily destroyed by washing out dishes and sink with a little permanganate solution. To this I would add that an even better means of destroying odor from sulphides is to add a drop of acid, any kind, to a solution of chloride of lime. W. D. says:

"To get the full depth of which the process is capable, therefore, it would seem that bromide and not gaslight paper must be employed, the exposure must be correct and on no account excessive, the development must be full, and the washing thorough. The subsequent toning is preferably carried out with the iodine bleacher, followed by ammonium sulphide rather than the sodium sulphide; although, in these two last respects, we believe almost equally good results can be obtained with the ferricyanide and bromide, and with sodium sulphide, if the latter is employed under the most favorable conditions."

FINGER-PRINT PHOTOGRAPHY

The photographing of finger-prints can hardly be considered part of the day's work of the average professional photographer, but at the same time a slight acquaintance with the subject may be of use to him, as when his services in this direction are required the urgency of the case leaves no time for looking up any directions or advice on the subject, the authorities usually grudging the time necessary to load the dark-slides with plates.

One of the points worth consideration is the best kind of plate to use for this branch of work. A text-book on the subject by "Oliver Cromwell" recommends a process plate, but states that an ordinary slow plate will answer the purpose should the other not be at hand. This, of course, is only common sense, as it is necessary to obtain the greatest possible contrast in the negative, a good black deposit with clear glass for the lines; but at the same time these directions may be followed to the letter and the photographer experience the same disastrous results as I did in one particular instance.

I was assured by the officer in charge that the finger-prints were clear black marks on a light wall, and I therefore provided myself with four process and four ordinary slow plates for the job. I tested the light with an exposure meter and exposed all the plates, varying the exposures a little to make sure of getting some of them just right. On development, the resulting negative showed the structure of the wall with some minute cracks in strong relief, but not a vestige of the finger-prints. Here was a dilemma, for good prints had been promised, as much depended on them. It was evident that another attempt must be made; but how were matters to be improved? I had noticed that the wall

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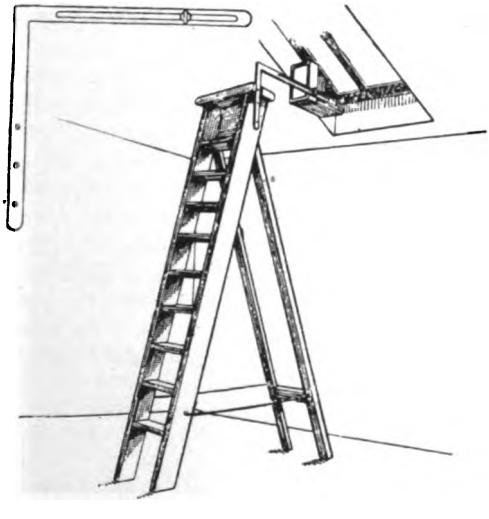
had a yellow tint, and whilst making the previous exposures it had occurred to me that an orthochromatic plate would have been useful, I therefore resolved to this time use orthochromatic plates and a screen. On revisiting the place and closely examining the walls and finger-prints, I found that the former were of a pale brownish-yellow and the finger-prints a bluish-green deposit—in reality, smuts from the slates. Fresh exposures were then made with the orthochromatic plates, using a ten-times light filter, and on these being developed the finger-prints were easily discernible, although the deposit was not quite as dense as would have been obtained with a process plate.



However, when the negatives had been intensified very good results were obtained from them.

The text-book above referred to states that a good half-plate camera, fitted with a first-class lens, is the most suitable instrument for this class of work. This is, of course, perfectly sound advice, but the use of such an instrument is only practicable when the finger-marks are sufficiently near the ground for the height of the tripod to be great enough to bring the lens directly opposite the marks to be photographed. Unfortunately, these marks are very often near the roof, and afford so little space to work in that the use of a double-extension half-plate camera is quite out of the question, and a temporary scaffolding—always a very shaky affair—would certainly cause vibration, which would be fatal to successful exposures. Under these conditions, the most useful apparatus is a small camera fitted with a good lens of very short focus, and with a good extension (three times the focal length of the lens, if possible), one taking plates 3½x2½ being quite large enough for prints of single fingers. A bracket, which will allow of the camera being fixed at one point, should be provided, the other end being easily screwed to the side of a ladder or a pair of steps. The place for the tripod screw should be a long slot, to allow of as much movement as possible in sliding the camera.

As this is a very difficult operation, a focussing-magnifier should be used, and a piece of clean white paper with plain black printed matter on it should be placed over the finger-print as a guide. A hole should then be cut in the paper large enough to allow the finger-print to show clearly in the center, and the paper itself left in position during exposure. This is useful, as it helps to throw the finger-print into relief, and afterwards serves as a guide in developing.

Development should be carried as far as it will go, so long as the lines remain clear, but when the lines or the black type begin to turn grey it should be immediately stopped. What is wanted is a strong black-and-white image, and if, after full development, the negative is not strong enough, it should be intensified. When the plate is dry, the printed matter can be blocked or masked out, leaving the finger-print (when printed) black on a pure white ground. The best prints are obtained on a gaslight paper with a glossy surface giving good contrasts.—J. Peat Millar, in *British Journal of Photography.*

LANTERN SLIDES BY PHYSICAL DEVELOPMENT

The "physical" development of lantern plates for certain classes of subject, such for instance, as snow scenes, seascape and distant landscape pictures, in the opinion of the writer, has great advantages over ordinary or "chemical" development, and deserves to be much better known and practiced than it appears to be. The wonderfully delicate tone, slightly bluish, which it gives, is so eminently suited to snow and sea pictures, and the suggestion of distance in mountainous scenery is so superior to that obtained

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by any other method, that it well repays the slight extra trouble involved.

Without entering very far into the rationale of the process, it may be said to depend upon the action of a developer consisting of silver nitrate and acid which, like the intensifiers usually employed by photographers to strengthen negatives, leaves a deposit of silver upon the image. It is not a very difficult process, but it requires even greater cleanliness than other photographic work, in consequence of the staining effects of the least trace of silver deposit upon dishes, etc.

The developer which I have found most successful is made up as follows:

A: Metol . . . . . 88 grains
Citric acid . . . . . 1 ounce
Water . . . . . 10 ounces
B: Silver nitrate . . . . . 480 grains
Water . . . . . 10 ounces

Two or three dishes (quarter-plate size are best) are required, and also a large dish containing a fresh hypo solution of the usual strength. The plates should be used as fresh as possible, and as they will be exposed during working rather freely, care must be taken to use a thoroughly safe light. A weak solution, say ten per cent, of nitric acid and water is useful for cleaning dishes (and the hands, which may be badly stained), and should be placed near at hand for immediate use. The plate after exposure is placed in a dish, and the developer, which must consist of ten parts of A to one part of B, poured over it. The dish is kept moving for four minutes. It is then poured off, the plate removed from the dish, and, after a rinse, laid upon the flat surface of the bench, upon a sheet of clean paper or glass. Personally, I use a small board, upon which have been tacked four very thin strips of wood to form a square slightly larger than the plate. A clean, evenly-folded tuft of cotton wool is then taken, and with it the plate is vigorously scrubbed until the whole of the silver deposit has been removed, when the image will show itself upon the surface.

If, on examination at this stage, it is not considered sufficiently dense it may be placed in a clean dish and fresh developer until further density is attained—the scrubbing being repeated. The plate is then fixed and washed in the ordinary way.

Great care must be taken that the scrubbing does not scratch or injure the emulsion, and the word "vigorously" must not be taken too literally. It is important that not more than the stated strength of developer be used, and the necessity for absolute cleanliness cannot be too strongly impressed.

Wratten and Wainwright's plates will be found to give admirable results, but other brands of bromide lantern plates have been found to work perfectly so long as they were quite fresh. The temperature of the solutions in use must not be higher than sixty to sixty-five degrees, as anything above that tends to soften the emulsion, so that it may not bear the scrubbing.

It may be noted that the "C" solution used in the Autochrome process is quite satisfactory for cleaning dishes, etc.

Such is the process, and I have yet to find the amateur who has not expressed admiration of the results.

It is a little difficult to give reliable data relating to exposure, but with a fairly fast bromide lantern plate it will generally work out at about four times that given for black tones. But as the process permits a certain amount of control in development the exposure problem is not a very great one.—W. A. Long, in *Photography*.

"PHOTOGRAPHISCHER ABREISSKALENDER, 1911"

This valuable annual addition of the literature of photography is again at hand, maintaining the high standard of excellence that it has so long upheld. As usual, it takes the form of a wall calendar, three days to the leaf, each leaf bearing the reproduction of a handsome photograph; and, in most cases, some valuable photographic information as well. The text, as the title suggests, is in German, but the pictures are, of course, in the universal language so well interpreted by the camera and lens. It is published by Wilhelm Knapp, Halle A. S., Germany. Price, two marks; postage sixty pfennings extra. Should any reader wish to order through us, we will have copies mailed direct to them for sixty-five cents.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

FACTORIAL DEVELOPMENT

A Tennessee subscriber asks that I explain just what factorial development is and what is understood by raising or lowering the factor. Let us assume that we have a pyro developer, one containing three grains of pyro to the ounce, and no bromide. I think the factor for such a developer is ten for negatives of average density. The exposed plate is placed in a tray and the developer poured on, the time being noted at the moment of so doing. The time that elapses between this pouring on of the developer and the first appearance of the image, generally some high light as the sky, is the first appearance time. We will suppose that this is found to be twenty-five seconds. This time becomes the key and we have but to cover up the tray and rock it gently for, the factor being eight, eight times twenty-five seconds, or four minutes and ten seconds. If the factor is right, we have a negative of average density. Examining the plate shows that it is not up to our requirements through our desiring extra strong contrast. We therefore continue to develop for fifty seconds longer, which is the same thing as raising the factor from ten to twelve, as we have developed for twelve times the time of first appearance. On the other hand, had we wanted to somewhat soften the effect, because of a subject having in itself quite excessive contrasts, we would have lowered the factor and developed for about eight times the time of first appearance, or three minutes and twenty seconds.

SILHOUETTES AT NIGHT

An Oregon correspondent has an idea that he can furnish considerable entertainment by making silhouettes at an evening's entertainment some friends have in mind. And he wants to know how he can do this photographically. Go about it in this way: Fix a thin sheet, free from crease, over a fairly large doorway. This is the background, in front of which the sitter is to be posed, about two feet distant, and of course so as to get a profile view. Lights in the room behind will suffice for focusing and arranging of the head in the right position, the camera being in line with the sitter and the sheet-covered door. Then uncap the lens and have an assistant burn about two feet of magnesium ribbon in the other room, and, of course, behind the sheet, but not close enough to endanger it from fire. The ribbon is best held in a pair of pliers and lit by touching a lighted candle to the lower end. Something like a sheet of zinc or tin, on the floor beneath, will catch any falling sparks or partially burned magnesium. More or less ribbon may be needed, according to the speed of the plate or film used, the size of the stop, and the size and color of walls of the room behind the sheet. The negatives should be developed quite strong so that the background will print perfectly white, if possible. The magnesium ribbon can be bought at any stock house for about sixty cents a roll, and a roll contains, as one correspondent wrote, "so many feet he would hate to have to measure it."

SOME BAD NEGATIVES

A New York correspondent recently developed a lot of plates, and, finding them all over exposed, carried them as far as he could in the hopes of getting sufficient contrast. The results he describes as being so dense that it takes all day to print; and, when he does get a print, it is as flat and lacking in contrast as a print well can be. What he wants to do is this: Make up a reducer by dissolving a good sized crystal of potassium ferricyanide in water and add enough of this solution to a plain hypo bath to give it a lemon color. Then treat the negatives with this until well reduced, bearing in mind that the hypo decomposes the ferricyanide and more must be added from time to time. The negatives reduced and well washed, they can then be intensified slightly. The reason for reducing past the desired point is this: the reducer given has a tendency to attack the weaker portions of

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the negative, the shadows, and by reducing beyond the desired point, some few of the shadows may be cleared up. Intensification will then build up everything a little more in the denser parts and the result will be increased contrast. Our correspondent should, if unacquainted with either or both processes, experiment on one or two of the less desirable negatives. Any good intensifier will answer; several such being on the market all ready prepared.

PERSULPHATE REDUCER

Another correspondent claims that he always gets an uneven, reddish discoloration of the negative when reducing with persulphate of ammonia, and asks why it should so happen. There are two possible causes. The hyposulphite of silver, a combination of the hypo and silver in the film that is perfectly transparent and insoluble, and not removed by the hypo, until a little later than the disappearance of the white from the back of the negative, may not have been eliminated by sufficient fixing. Or, the water used may contain an excess of impurities common to ordinary city water. In the first case an insoluble sulphur compound is formed, and in the latter there is no doubt a silver chloride. The only remedy we can suggest is thorough fixing and washing of the negatives, previous to intensifying. In the latter case, immersion in a fixing bath after intensification will generally remove the stains.

DEVELOPER FOR CONTRAST

A correspondent in Illinois wants a developer that will give strong and clean contrasts in black and white work. The formula below is recommended:

Hydroquinone	140 grains
Sodium sulphite	60 grains
Formaline	180 minims
Water	20 ounces

While slow in action, this works clean and gives great contrast.

PLATE SPEED NUMBERS

A Pennsylvania reader wants to know how he can convert H. & D. plate speed numbers into Watkins' or Wynne's meter numbers. The rule is: To convert H. & D. into Watkins', multiply H. & D. by fifty and divide by thirty-four. As a recent English authority has said, the relationship between Watkins' and Wynne's meter numbers has been put into a great muddle by different writers giving rules for converting one into the other. There is no real relationship that can be reduced to a simple rule, but for all practical purposes, extracting the square root of the Watkins' speed number and multiplying by six and four-tenths will give the Wynne F number.

COLD VARNISH

A subscriber says he wants to varnish all his negatives, but he does not like the trouble of heating the negative and applying the varnish warm. He can just as well use a cold varnish, one made by adding two ounces of benzole to an ounce of japanner's best gold size. It will dry quicker if the benzole is increased to three ounces, but the coating will not dry down smooth with the same facility. This can be applied by merely brushing it on the negative as evenly as possible and then placing the plate perfectly level for the varnish to set and become dry.

ACID FIXING BATH

A reader in Nebraska wants a formula for an acid fixing bath in which either citric or sulphuric acid is used. A good fixing bath of the kind described is made as follows: Dissolve twenty ounces of hypo in sixty-four ounces of water and then add the following solution:

Sodium sulphite	8 ounces
Citric acid	1 ounce
Warm water	16 ounces

THE GOERZ COMPANY MOVE

In order to handle their increasing business to better advantage, and to be in closer touch with the trade, the C. P. Goerz American Optical Company has moved their offices and factory from their old location on East One Hundred and Thirtieth Street to 317-323 East Thirty-fourth Street, New York. The move is a good one and is sure to be appreciated by their many customers, particularly those who may be visiting or doing business in the metropolis.

WAXING SOLUTION FOR CARBON

Into two ounces of benzole put one-half ounce of yellow beeswax, cut into fine shavings. When dissolved as far as possible, add two ounces each of ether and alcohol. This should be rubbed on the temporary support, be it paper, glass, or celluloid, by placing two or three drops in the center of an 8x10 surface and rubbed about with a tuft of cotton wool.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

ILLINOIS MEMBERS

Illinois Album No. 6 is to start soon and your album director, George A. Price, Summit, Illinois, very earnestly desires to have a larger representation of the members on the route list. If you can only send him one print, do so, and take the opportunity of seeing one of the albums and seeing what Mr. Price is trying to do for you. Canadian Album No. 1 is being circulated over the Illinois route list of contributing members and you should be on the route list for this and following albums from other States. Send a print or prints to Mr. Price at the above address, at once, before it is overlooked.

OFFICERS OF THE I. P. A.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 200 South Marion St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

California—W. E. Thomson, 3540 School St., Fruitvale, Oakland.

Indiana—R. A. Underwood, 912 E. 15th St., Indianapolis.

Kansas—H. H. Gill, Hays City.

Mississippi—Joe C. Montgomery, R. F. D. No. 1, Box 36, Edwards.

Missouri—J. F. Peters, 6220 Berthold Ave., St. Louis.

New York—Louis R. Murray, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

Wisconsin—F. W. Freitag, 500 Monument Square, Racine.

FOREIGN SECRETARIES.

French—Charles A. Wargny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German — George N. Baumiller, Nutwood, Ohio.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Alaska—P. S. Hunt, Valdez.

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Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

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Mississippi—Emory W. Ross, Institute Rural Station, Edwards.

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Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 266 Ford St., Ogdensburg.

New Jersey—Burton H. Allbee, 103 Union St., Hackensack.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.

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Oregon—Leonard S. Hopfield, Box 622, McMinnville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—Frank Reeves, Roby.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

2663—R. A. Hays, U. S. S. South Dakota, Pacific Station, via San Francisco, Cal. 3¼x5½, developing paper, of miscellaneous subjects; for any good prints of interest. Post cards mainly. Class 1.

2664—Amelia Richmann, Carroll, Iowa. 3¼x4¼, various papers, of landscapes and general photography; for the same. Prefer prints. Class 1.

2665—W. O. Lott, 2245 Hamilton St., Regina, Sask., Canada. Class 2.

2666—Hugh C. Gilliam, U. S. S. Des Moines care Postmaster, New York City. 5x7 and 3¼x5½, various papers, of subjects at large and photos, also foreign scenes; for any kind of good prints or post cards. Class 1.

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2667—Frank Stewart, Lock Box 141, Fairhope, Alabama.
Class 2.

2668—W. J. Davis, Box 81, Deary, Idaho.
Class 2.

2669—C. M. Larvutis, 3910 So. Park Ave., Los Angeles, Cal.
4x5, developing paper, of amateur indoor portraits, fake pictures, duplicates, triplicates and odd pictures; for the same and monuments. Class 1.

2670—E. A. Doolittle, Box 34, Painesville, Ohio.
3¼x5½, printing-out and developing papers, of landscapes, water scenes and interesting subjects; for the same, also historical places and Indian life, on unmounted prints and post cards. Class 1.

2671—Arthur Soderstrum, 2944 E. 28th St., Kansas City, Mo.
Class 2.

2672—Edwin F. Casper, 940 38th St., Milwaukee, Wis.
Class 2.

2673—Miss Lois Clency, Box 293, Escondido, Cal.
2¼x3¼ to 3¼x5½, developing paper, of children, groups, and Southern California views; for views, marine and nature pictures in unmounted prints and post cards. Class 1.

2674—Fred W. Carruth, 220 Prospect St., Fort Morgan, Colo.
Class 2.

2675—Mrs. S. A. Parkinson, R. F. D. No. 3, Box 67A, Greeley, Colo.
Post cards. Class 1.

2676—Joseph S. Owen, 10 Bedford Place, Atlanta, Ga.
Class 2.

2677—Clarence Jacobson, 904 Logan St., Louisville, Ky.
3¼x5½, developing paper, of views and portraits; for any kind of photos. Class 1.

2678—Ross C. Brown, care N. M. C. S., Silver City, N. M.
3¼x5½, developing paper, of woods, water, park scenes, mountain, Mexican, cattle, plains and New Mexico views; for general views both domestic and foreign. Class 1.

2679—E. W. Lathrop, Lock Box 47, Castile, N. Y.
5x7 and 8x10, various papers, of river scenery of Genesee River, N. Y. park and commercial work; for post cards mostly. Class 1.

2680—Robert Belcher, Merchants Exchange Bldg., San Francisco, Cal.
Class 2.

2681—Earl Middleton, R. F. D. No. 1, Republic, Wash.
Class 2.

2682—Albert P. Paine, 12 Western Ave., St. Johnsbury, Vt.
Class 2.

RENEWALS.

161—F. W. Sutton, Peabody, Kans.
Class 2.

1036—F. L. Layton, Montfort, Wis.
4x5 and smaller, developing paper, of outdoor scenes of animals and children; for the same. Post cards and stereos only. Class 1.

1806—Robt. Ritchie, Boissevain, Man., Canada (was Manitou).
Class 2.

1814X—G. A. Hall, Clifton Station, Va.
Post cards. Class 1.

1818X—Paul P. B. Brooks, Hopkinsville, Ky.
Post cards and up to 5x7, developing paper, of general views; for the same. Post cards only. Class 1.

1864—A. G. Lindgren, Ellsworth, Minn.
3¼x5½ and 3½x12, developing paper, of landscapes and water scenes in Minn., Colo., Utah, Cal., Wash., and Canada; for post cards or prints of general interest from any portion of the world. Post cards preferred. Class 1.

1872—Frank Reeves, Roby, Texas (was Graham).
Post cards and up to 6½x8½, printing-out and developing papers, of hunting, outing, landscapes, water scenes, farming and baby pictures; for hunting, fishing, mountain, water scenes, landscapes and particularly foreign views. Post cards or prints of any size. Class 1.

1909X—E. Van Valkenburgh, Box 184, Inverness, Cal.
3¼x5½, developing paper, of tree studies, landscapes, marines, scenery, etc.; for animal pictures, good genre, marines, flower studies, or anything of interest except public or private buildings. Class 1.

1976—O. P. McCray, First Ave. So. and Fifth St., Great Falls, Mont.
Class 2.

2091—J. F. Peters, 6220 Berthold Ave., St. Louis, Mo.
Lantern slides; would like post cards as subject before slide is sent or will give 5x7 print or post card for slides. Class 1.

2121X—Miss Minnie Mendenhall, 126 N. Friend's Ave., Whittier, Cal.
Class 2.

2146X—U. W. Tryon, 302 North Railroad St., Kendallville, Ind.
Post cards, 4x6, and 8x10, developing paper of miscellaneous pictures; for any good pictures. Good work only. Class 1.

2151—Pres. Fidler, Box 169, Weed, Cal.
Wishes to withdraw from Class 2 and enter Class 3, as time is too limited to exchange properly.

2156—G. Leonard Pitchford, 1321 Sixth St., S. E. Minneapolis, Minn.
Post cards, from Graflex negatives of athletic sports, racing, animals, scenery and general subjects; for anything of interest. Class 1.

2193—A. Aug. Anderson, 414 Eighth St., So., Minneapolis, Minn.
5x7, developing paper, of miscellaneous subjects; for any kind of subjects. Post cards only. Class 1.

2220X—H. W. Terhune, St. John, Wash.
Class 2.

2221—Edwin D. Guthrie, Port Angeles, Wash.
Post cards. Class 1.

2243—Henry A. Hoyt, 827 Spencer Ave., Santa Rosa, Cal.
3¼x5½ and 5x7, developing paper, of Redwood scenes, marines and child studies; for water studies, landscapes and views of interest. Only good work desired. Class 1.

2347—Mrs. Harold N. Jones, 903 Fourth Ave., Dodge City, Kans. (was Bozeman, Mont.).
Class 1.

2361—Eugene Clifford, Weippe, Idaho.
Post cards or 3¼x5½, developing paper, of snow, forest and other interesting Western views; for marine views, noted places and foreign views. Class 1 for post cards and prints. If those to whom I owe cards will send list of what they have received from me, I will make up deficiencies.

2387—Frank J. Horton, Goodland, Kans.
Post cards, developing and printing-out papers, of general views; for same. Post cards only. Class 1.

2593X—Don R. Winslow, Zumbrota, Minn.
Post cards on developing paper. Class 1.

CHANGES OF ADDRESS.

1822—C. F. Fisher, Tabor, Iowa.
(Was Le Mars, Iowa).

1895X—Arthur L. Burgess, 879 E. Long St., Columbus, Ohio.
(Was 183 Jefferson Ave.).

2320—Harry C. Gibson, 495 Gratiot Ave., Detroit, Mich.
(Was 816 Humboldt Ave.).

2357—Miss Effie F. Mitchell, 1604 E. 33d St., Kansas City, Mo.
(Was Oakland, Cal.).

2427—S. C. Lund, Wolf Point, Mont.
(Was Carrington, N. Dak.).

2534—W. R. Frye Malden, Wash.
(Was Buckley, Wash.).

2366—G. J. Smith, 1007 West 25th St., Los Angeles, Cal.
(Was Burlington, Vt.).

2536—R. Le Fevre, 93 Wenona St., Ocala, Fla.
(Was Carlinville, Ill.).

2610—Bert Adkins, Italy, Texas.
(Was Milford, Texas).

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CLUB NEWS AND NOTES

Club Secretaries and others will oblige by sending us reports for this Department.

PHOTO-SECESSION EXHIBITION

From November 18th to December 8th, a loaned collection of some lithographs by Manet, Cézanne, Renoir and Toulouse-Lautrec; a few drawings by Rodin; and smaller paintings and drawings by Henri Rousseau were exhibited at the Photo-Secession Gallery, 291 Fifth Avenue, New York. The work of Henri Rousseau, who died September 5th of this year, was shown for the first time in this country. For many years his work was of a most interesting character in the Salon des Artistes Indépendents of Paris, in which he steadily exhibited since 1886, and for whose existence he fought from the beginning. The few pictures in this exhibition are loaned by Mr. Max Weber, who was a devoted friend of Henri Rousseau. He began his career in the Custom House service of the French government, but, gifted with artistic instincts, he eventually sought to express himself in plastic art. His work greatly interested the younger group of painters and critics in Paris known as Les Fauves, who were his greatest friends and admirers up to the last. He was truly naive and personal; a real "primitive" living in our time. He loved nature passionately and painted as he saw it. His larger work is very fantastic and decorative, and recalls Giotto and other primitives. He lived a life of simplicity and purity, the spirit of which dominates his work.

A TRAVELING BULL'S-EYE

For some months the Y. M. C. A. Camera Club of Buffalo has been planning to send a camera around the world, stopping at twenty different points of interest; and, through the Y. M. C. A. secretaries, securing six or more exposures at each stop, the films being sent back to the Y. M. C. A. at Buffalo for development, while the camera goes on to the next stop. Such genuine interest had been manifested in the camera's trip, that, when he heard of it, the advertising manager of the Eastman Kodak Company volunteered to donate a camera for the purpose. The club had planned to buy a small box camera, but accepted the offer and selected a No. 3 Bull's Eye camera as the one best adapted to the requirements. It was sent off, with fitting ceremonies, on November 14th, with Seattle, Washington, as the first stopping place. From there it will go to Honolulu, Manila, Tokyo, Pekin, Bombay, Calcutta, Cairo, Jerusalem, Constantinople, Athens, Rome, Venice, Paris, London and a few other places. Inside of the wooden case, which was specially prepared for the purpose, are full instructions as to the handling of the instrument and its forwarding. An affidavit also accompanied the camera to obviate custom house difficulties. The resultant pictures will form the basis of an exhibition as soon as the camera's trip is completed. The officers of the club which has promoted this tour are: Hugh Price, president; H. A. Cornell, vice-president; Nelson Keel, secretary-treasurer, and J. Gustav White, advisor.

CHICAGO CAMERA CLUB

The Club's Thursday evening meetings have recently included a very interesting talk on "Light," by the president, Geo. C. McKee; a trip through the Yellowstone, via the colored lantern slide route, conducted by Mr. C. A. Molitor; an unusually fine set of English slides, loaned by the American Lantern Slide Interchange, and a lantern lecture on California by Geo. R. King of Boston. The Club is this year represented in the Salon of the American Federation by twenty-eight pictures contributed by eleven members; and, has also placed in the Camera Club Print Interchange a portfolio of twenty-two prints, chosen by jury from seventy-five submitted. Plans for 1911 contemplate ten "one man" exhibits of about two weeks each, limited to fifteen pictures. It is believed this limit will greatly stimulate the idea of merit rather than quantity and will develop a corps of more earnest workers along pictorial lines.

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OUR BOOK SHELVES

"PENROSE'S PICTORIAL ANNUAL"

The new volume of Penrose's Annual (The Process Year Book) will be published and on sale by the time this reaches our readers. The one hundred and ninety-two pages of text comprise upwards of sixty illustrated articles on technical subjects by eminent British and foreign authorities, dealing, in an interesting manner, with important matters of theory and practice in process work, printing, photography and allied trades. From a pictorial point of view we believe that the present issue surpasses anything that we have previously attempted. There are full-page illustrations, 96 one-color, nineteen two-color, fifteen three-color, and five four-color plates. A number of two, three, and four-color special supplements, contributed by foremost British, American and Continental houses, several examples of lithographic offset printing in from one to ten colors, and hundreds of smaller engravings, are also included. It will be sent, express prepaid, for two dollars and fifty cents by the American agents, Tennant & Ward, 122 East Twenty-fifth Street, New York. The local firm, Hirsch & Kaiser, will have a supply and fill orders while they last.

"THE WELLCOME PHOTOGRAPHIC EXPOSURE RECORD AND DIARY FOR 1911"

Start the new year right by getting one of these invaluable pocket companions. It is a convenience that is becoming more and more popular each year, simply because the man who uses one this year is sure to buy one again next year; getting, of course, the new edition. It contains, in addition to the unusual number of blanks for exposure records, a most efficient exposure meter and a mass of photographic information that is almost unbelievable for such a convenient size of a pocket companion. This is made possible by the fine, thin paper used, and the care and condensation displayed in making up the contents. It costs but fifty cents and we can assure our readers that a better fifty cents' worth of photographic efficiency is not obtainable. Address, Burroughs, Wellcome & Company, Department P, 35, 37 and 39 West Thirty-third Street, New York.

"THE BRITISH JOURNAL ALMANAC, 1911"

Just as complete and comprehensive as ever, there comes to our desk the new 1911 edition of this yearly record of things photographic. It is well to order a copy at once as the edition is, not infrequently, exhausted before the demand is supplied. The price of the paper-covered edition is fifty cents at the stores; postage, when ordered by mail, twenty-seven cents. The cloth-bound edition is one dollar; postage, thirty-seven cents. George Murphy, Incorporated, 57 East Ninth Street, New York, are sales agents for this country.

"AMERICAN ANNUAL FOR 1911"

The new volume of the *"American Annual of Photography"* is now on sale at all the dealers. It contains thirty-two plates in colors and over two hundred fine half-tone reproductions of the current work of well known photographers. The list of contributed articles is a most inviting one, the authors represented being a fairly complete list of the well known authorities in this country and England. All in all, the book is, as the prospectus says, "a treasury of photographic information and pictures." The price is seventy-five cents for the paper covered edition and one dollar and twenty-five cents for the cloth bound library edition. In ordering by mail, fifteen cents extra should be sent as postage on the first, and twenty cents as postage on the latter named binding. As heretofore, the distributing agents are George Murphy, Incorporated, 59 East Ninth Street, New York.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE WINNERS 1910 KODAK ADVERTISING CONTEST

Class A—First prize, $500.00, Wm. Shewell Ellis, Philadelphia; second prize, $400.00, H. E. Lawson, New York; third prize, $250.00, F. & C. A. Maynard, West Philadelphia; fourth prize, $150.00, R. T. Dooner, Philadelphia; and fifth prize, $100.00, A. F. Bradley, New York.

Class B—First prize, $300.00, R. B. Marsh, San Francisco; second prize, $150.00, Nancy Ford Cones, Loveland, Ohio; third prize, $75.00, R. J. Barber, Bloomington, Illinois; fourth prize, $50.00, Dr. Robt. Nones, Jr., Philadelphia; and fifth prize, $25.00, Mrs. N. A. H. Bromley, Philadelphia.

Commenting on the results, the company's announcement says: "When the awards were completed our advertising manager, who acted as clerk to the judges, took off the numbers, referred to his list of competitors and then told the judges who the winners were, with the remark that it was rather unfortunate to have the prizes go so regularly to so many of the same people in the same part of the country.

"To this remark, one of the judges, Geo. H. Hazen, of the *Century Magazine*, said: 'It may be unfortunate, but there's one thing sure. It proves that your competitions are on the level. If you were playing politics with them you would pass the prizes around the country.'

"In Class B, Philadelphia is again twice represented, but the first prize goes to San Francisco, second prize to Ohio, third to Illinois and fourth and fifth to Philadelphia. The only former winner to take a prize in this class was Mrs. Nancy Ford-Cones of Loveland, Ohio.

"The first, second and third prize winners of Class A in our Kodak Advertising Competition, went to men who have won prizes before in these competitions. Moreover, all of the five prizes in this class went to New York and Philadelphia, and the winner of the first prize, Wm. Shewell Ellis, was winner of the first prize in last year's competition.

"For this seeming favoritism we have no apologies to offer. The judges did not know, until their task was finished, to whom they were making the awards as the prints they passed upon were merely numbered. In no case did the name of the photographer appear upon the print."

"TABLOID" PHOTOGRAPHIC OUTFIT

"Tabloid" Photographic Outfit No. 906 presents a compact and comprehensive equipment of "Tabloid" photographic chemicals for developing and fixing plates, films, papers and lantern slides. It also contains "Tabloid" chemicals for intensifying, reducing, sepia toning, copper toning, hardening, clearing, restraining, etc. Sufficient chemicals are provided to make several gallons of solutions in large or small quantities, fresh and vigorous for each occasion, without the trouble of weighing and without waste. A copy of the *"Wellcome" Photographic Exposure Record and Diary*, a complete pocket guide to success in field and dark room, is also included. The whole is contained in a neat metal casket which can be packed snugly into the traveling bag for use on tours.

A REVERSIBLE DEVELOPING TANK

For simplicity, ease and excellent results the superiority of the developing tank cannot be questioned. The Prize Reversible Developing Tank, a new model of unique construction, develops twelve or less plates with equal facility and requires a minimum quantity of solution. The lid, which is furnished with a rubber pad, clamps down securely over the top of the tank by means of catches at the side, which have considerable leverage power; this permits of reversing the tank or placing it in any position with no fear of leakage. Its handsome appearance and sound construction, solid brass, polished, then nickel plated, are gaining for it a well deserved popularity. This tank is of special interest to both professional and amateurs,

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as the plate rack, in all its sizes, has an adjustable set of grooves, making it possible to use any size for different sizes of plates. Anyone contemplating purchasing a tank should send to G. Gennert, 24-26 East Thirteenth Street, New York, or 16-20 State Street, Chicago, for their booklet "On Developing Tanks," which contains a full description of all the models made by them.

FOREIGN STUDENTS ENROLLED

The fall enrollment at the Bissell Colleges has been exceptionally large this year, the October class numbering among its students the following members from abroad: J. Ispiridon, Saad, Kefire, Turkey; Woo Kiu Yu, Korea; K. Shedlowski, Russia; Garo Kawano, Tokyo, Japan, and Angel C. Rodriguez, Caracas, Venezuela. This is quite a good showing for one month's class, and indicates quite strongly the world-wide popularity which the Bissell Colleges enjoy. President Harris, of the Photographers' Association of America, recently spent a day at the colleges and gave the students a fine talk on the subject of Studio Management.

MR. SLAYTON MOVES

S. Slayton, the well known photographic repair man, has moved from the Lincoln Building to 206 Stevenson Street, near Third, this city. His telephone is Douglas 5686. Mr. Slayton and his work are too well known to photographers in this section to need any comment from us. He has been in the business for twenty years and has made the Slayton Reflecting Camera for over half that period, being one of the first to manufacture cameras of the reflecting type. Cameras of his make are used by nearly all the press photographers in San Francisco and the bay cities, and this would hardly be the case were they other than serviceable and dependable. His advertisement, which is of interest to all working photographers, appears on another page.

SPECIAL BACKGROUNDS

The well known painter and professional photographer, Jacob Fowzer, of this city, has been devoting more than a little time and attention of late to the background painting branch of his activities. He has some of the latest ideas which he is working out most successfully, combining as he does his skill as a painter with his knowledge of what the professional photographer requires. Two of his recent creations are reproductions of the Cliff House in colors, made for the Cliff House photographer; their photographic quality being so good that a duplicate order was at once placed. His address is 3126 Sixteenth Street, this city; and we would advise a visit to his studio, particularly as he has some handsome oil paintings on display.

SEVENTEENTH ANNUAL CATALOGUE

Just as we go to press comes the Seventeenth Annual Catalogue of the Bissell Colleges, Effingham, Illinois. It is a handsome book, illustrated with three full-page photographs, five handsome examples of fine color work, and a wealth of photographic reproductions. Such of our readers who write for a copy may count themselves lucky in securing so handsome a book devoted to so important a subject as the proper teaching of thorough photographic or photo-engraving course. The college has the endorsement of the Photographers' Association of Illinois, and of the International Association of Photo-Engravers, and this, coupled with its long standing, should inspire confidence in its capabilities.

H. SNOWDEN WARD TO AGAIN LECTURE HERE

Mr. Ward, under date of December first, writes: "I am sailing, the middle of next week, for the United States, with an excellent season booked. I will deliver six lectures, on the eighth, fifteenth, and twenty-second of February, at the Tremont Temple, Boston. This includes three renderings of 'The Marvels of Photography,' and the same lecture is booked for Philadelphia, January thirteenth; Albany, January twentieth; Wellesley College, February thirteenth, and for several other places where dates are not yet definitely fixed. The bulk of my bookings, however, are for my literary subjects, and particularly for the 'Canterbury Pilgrimages,' which seems to be the favorite this season as it was last winter. My bookings include some in Michigan and Indiana, which are the most westerly points reached in this trip."

OTHER VISITORS COMING

In the same letter, Mr. Ward says: "Your readers may be interested in knowing that William Crooke, of Edinburgh, and H. Walter Barnett, of London, are sailing, on December 17th, for a six weeks' tour in the

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United States, during which they hope to visit some of the leading photographers in New York, Philadelphia, Washington, Baltimore, Pittsburg, St. Louis, Chicago, Milwaukee, Niagara Falls, Buffalo, Rochester, Boston and other cities.

"These gentlemen have been asked by some of their American friends to bring collections of their portrait work. Mr. Crooke will have about sixty of his large pictures, made during the past few years, and many of them shown at the exhibition of the Royal Photographic Society and at the Photographic Salon. Mr. Barnett will have one hundred uniform prints, all in whole plate size (6½x8½), and all made during the one month of November, 1910. Such a display, made up of the regular, every-day work as done during one month, is bound to be extremely interesting to photographers, apart from being quite a novelty in the traditions of exhibitors."

SOME NEW PAPERS

We have just been asked to announce that: "Shortly after the first of the year, a line of developing papers will be put on the market by the Cramer Photo Paper Company, G. Cramer, President, 6616 and 6618 Cottage Grove Avenue, Chicago, Illinois. These papers are no lucky accident, but the result of careful, scientific investigation. They surpass, in many respects, other developing papers, and will greatly assist the photographer in obtaining his ideal of what a print should be. Full details will be given later, but, first, last, and at all times, Cramer reputation backs them."

SOME NEW LENSES FOR KODAKS

We have recently had the pleasure of inspecting some very interesting series of photographs made with some new lenses recently introduced by the Standard Optical Company of Newark, New Jersey. There are three of these lenses, and they are used by substituting the desired one for the front lens of the regular Kodak equipment. They can be bought separately if desired, and the prices are remarkably low. With the "Stanwyde," a wide angle lens is obtained; with the "Stanport," one has the advantage of a soft portrait lens and one capable of giving a larger picture. With the "Stantell," a telephoto lens is made and telephoto work made possible with the ordinary equipment. The series of photographs we have examined bear out all the claims of the makers, and we would advise our readers to send for their interesting folder, giving full particulars, and an exposure table of great value. The firm's address is given above.

A NEW BRANCH

The Defender Photo Supply Company has established a branch office and supply house in Minneapolis, located at "Reid Corner," Ninth Street and Nicollet Avenue. The new quarters are in the center of the city's business district, and have been fitted up for the special purpose of taking care of the company's expanding trade in this growing section of the country. The manager

at Minneapolis is R. D. Seely, who has, for several years, been in charge of the photographic department of the New England Furniture Company's store in that city. He has many friends among photographers, and brings to the Defender Company a thorough knowledge of the business that will serve him well in his new position.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. Those of positions wanted inserted free. No business advertisements will be accepted.

FOR SALE the leading studio in a progressive western city of 12,000 population. Studio new and up to date; reception room furnished in solid oak, mission finish; operating room 40 feet square, north light and new Aristo lamp, 8x10 portrait outfit, 8x10 view outfit and 5x7 view outfit. All rooms of studio steam heated. Rent $30.00 per month. Studio enjoys the confidence and patronage of the leading people in the city. An A1 business proposition for a good workman. Price $1500.00. Refer by permission to Fayette J. Clute, Editor of "Camera Craft". Address W. G. Emery, Vancouver, Wash.

FOR SALE Portable outfit, now located in good town near San Francisco; see leading article in the June "Camera Craft" for description; $350.00 cash will buy; owner now located in permanent studio. Peter Nick, 433 3rd St., San Bernardino, Cal.

FOR SALE 6½x8½ Reflex camera; slightly used; a bargain for $65.00 cash. The Marsh-Girvin Co., 712 Market St., San Francisco, Cal.

POSITION WANTED Years of experience; understand the work throughout; good operator; fair retoucher. Inez G. Fitz Gerald, Gilroy, Cal.

FOR SALE San Francisco studio, good location, fully equipped and doing a good business. Must sacrifice. Good reason for selling. Address S. L., care "Camera Craft," San Francisco, Cal.

FOR SALE 6½x8½ Empire State View camera, equipped with Beck lens in Bausch & Lomb shutter, 3 plate holders, carrying case, tripod. In fine condition. Price $35.00. A bargain. A. B. Smith, room 505, 693 Mission St., San Francisco, Cal.

WANTED Small pocket camera, with fast lens and shutter, smaller the better. Give full particulars and price wanted. Myers Optical Co., Shafer Building, Seattle, Wash.

FOR SALE Cirkut camera No. 10, at a bargain; good condition; $150.00 without the lens; gears for 10⅞; 18 to 24-inch focus, complete with lens, $225.00. Also have a well equipped studio for sale; best location in Los Angeles, at a bargain for cash. Complete for all sizes of work; enlarging plant, etc.; cheap rent and long lease. For particulars address Chas. Z. Bailey, 326½ South Broadway, Los Angeles, Cal.

FOR SALE First-class studio in center of Los Angeles; long lease, low rent. Address W. Roberts, 523 Germain Bldg., Los Angeles, Cal.

FOR SALE Studio in town of 5,000 population in Oregon, located on main street in best business center; ground floor, well equipped, doing good business. Good reason for selling. Address H. O., care "Camera Craft," San Francisco, Cal.

FOR SALE A 5x7, latest improved, reversible back Reflex camera with a No. 22½, series II, 10.4-inch focus, F:4.5 Cooke lens; absolutely new; cost $210.00; price $175.00 f. o. b. Los Angeles. Address W. E., care "Camera Craft," San Francisco, Cal.

WANTED 3A Eastman, or camera about that size; give full particulars and quote lowest price. Address Lock Box 265, Fort Wayne, Ind.

FOR SALE or rent—Studio with two rooms, 14x24, fitted up to 8x10, for out and in-door work. Population 700. Have to leave on account of starting other business. Worth $1,100.00. J. Niedan, Delmont, South Dakota.

FOR SALE Will sell my studio very cheap because I am no studio man; it has been established 18 years, and everything is in good condition; population of this city 15,000; Southern California; best climate and first-class people; rent only $10.00 a month; a good man can do a good business. For further particulars address, P. N. N., care "Camera Craft," San Francisco, Cal.

FOR SALE photo studio in Oakland, Cal.; old-established, doing high class work; long lease, reasonable rent; must sell at once. V. C. Cole, 1362 West Street, Oakland, Cal.

FOR SALE at a sacrifice, two of the most up-to-date studios in richest county in Southern California, 18 miles apart, with a Reo automobile; both doing a good business; one in town of 2,500, no competition; other in factory town of 4,500. Have other interests and makes too much work for me. Will sell part or all; $900.00 cash before Christmas rush. Address J. E. H., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By a first-class lady retoucher and A1 receptionist. Address Miss Anna Hulbert, General Delivery, San Francisco, Cal.

POSITION WANTED A successful portrait photographer wishes to identify himself with established gallery in large city and will either share profits or accept salary and assist operator in gallery. Address Hustler, care "Camera Craft," San Francisco, Cal.

POSITION WANTED in the West; five years' experience in studio; one year at Southern School of Photography. Have held present position for whole year since I left the School of Photography. References W. S. Lively, McMinnville, Tennessee; also present employer. Am an all-round man, single. Please state salary paid. Might rent a gallery. R. L. Greethurst, Peterson, Minn.

FOR SALE Leading studio in Redlands, Cal.; $1,800 cash. Address W. C. Butman, Redlands, Cal.

FOR SALE Bausch & Lomb extra rapid Universal lens, series D, 8x10 with Volute shutter, nearly new, perfect order; cost $87.50; will sell for $45.00 cash. Address L. J. P., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By expert at home portrait and view photographer. Have complete portable at home portrait outfit. Best offer accepted anywhere. Address H. B. Manning, Alexandria, Ind.

FOR SALE Complete set Self-Instructing Library of Practical Photography, green cloth; never used; $16.00. Roy Sawyer, 1564 Greenup St., Covington, Ky.

FOR SALE First-class studio in city of 5,000, one other studio; reason for selling other business needs attention. Address R. B., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By first-class retoucher and color artist, all-round photographic experience. Address Richard Wagner, General Delivery, Los Angeles, Cal.

FOR SALE 5x7 Century camera, three plate holders, sole leather carrying case, like new; cost $57.00, sell for $25.00. C. D. James, Room 505, 693 Mission St., San Francisco, Cal.

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The quality of pure collo
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excelled.

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Simple in manipulation, pr
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The toning chemicals are in the paper—just print, wash, fix.

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EASTMAN KODAK COMPANY
JAMESTOWN, N. Y.

All Dealers.

Please Mention Camera Craft when Corresponding with Advertisers

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VELOX

The paper designed to meet the needs of every amateur negative. Velox yields good prints from flat negatives—good prints from negatives of contrast—best prints from all negatives.

There's a grade of Velox for every negative and the "Velox Book" will enable you to select the proper grade. This booklet contains valuable information on printing, developing, the making of sepia toners, mounting, etc., and is free at the dealers or from us by mail.

Nepera Division,
EASTMAN KODAK CO.
ROCHESTER, N. Y.

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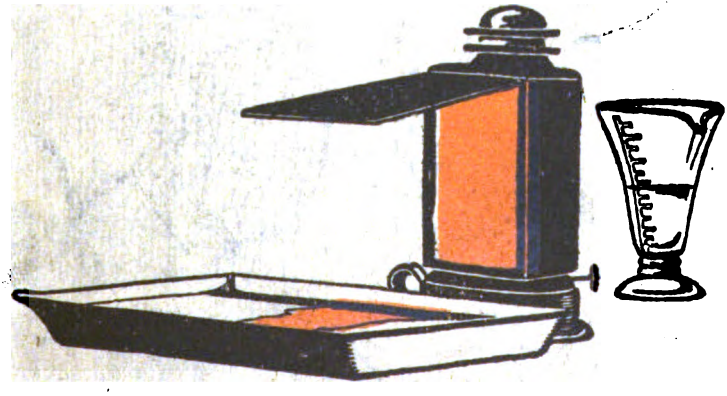
Vol. XVIII No. 2 FEBRUARY, 1911 Price, 10 Ce

Camera Craft



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ONE hundred and forty-four perfect prints out of every gross

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Based upon the rate per thousand of *good prints* during the year, as compared with other papers, the photographer should be willing to pay double for

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A STAGE FAVORITE
By PERCY KING

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

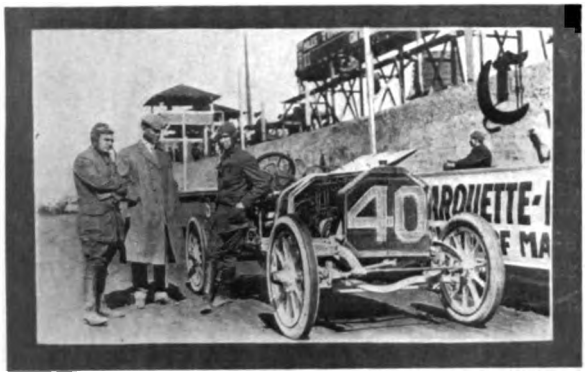
VOL. XVIII FEBRUARY, 1911 No. 2

The Commercial Side

By Lawrence Heyd Smith

Our Article Winning a Wold Air Brush This Month

With Illustrations by the Author



"WILD BOB" BURMAN AT ATLANTA MEET

COMMERCIAL photography, that branch which covers practically every line of endeavor with the camera, except portraiture, has been woefully neglected in the articles that have so far been successful in winning the air brushes already distributed by CAMERA CRAFT. I have waited, but in vain, for a pen more worthy than mine to explain some of its mysteries and help the beginner on his way. The commercial man needs help as much as does the one who confines himself to portraiture. A few suggestions, gathered from my own experience, may assist.

The term, Commercial Photography, like charity, covers a multitude of sins. I know of no other two words that, in their full meaning, embrace so many lines of endeavor. Strictly speaking, I take the term to mean that division of professional photography which deals only with the manufactured articles, the results being used mainly for catalogues and cuts. In reality, every photographer, except the amateur, is a Commercial Photographer.

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Most of the work of the commercial man is for intended advertising and reproduction purposes. The photographs furnished for this purpose are, in reality, silent salesmen; and, as such, should present the subject, not only with exact truthfulness, but in the most attractive and pleasing form possible. There are a thousand things to be remembered, and done, each time an exposure is made; things which, though small in themselves, will do much to make or mar the final result. Then, too, every firm has its own ideas as to what qualities go to make up an acceptable photograph, and their wishes must be followed or the other photographer will get the chance he has been waiting for; a chance to show how much better his work is than yours. This is one of the hardships to which you must accustom yourself. However, my advice is, let the other man have the work if the firm demands photographs that are not technically good;

A SHOW WINDOW PHOTOGRAPHED AT NIGHT

for no one wishes to let a photograph leave his studio that will not reflect credit on its maker. In this general outline there is just one more thing, and that is, —Don't cut prices. Make your prices reasonable when you start in business, and stick to them; always being sure that the work you turn out is worth the amount you charge, or, better still, worth a little more. This may make the beginnings a trifle slow, but you will find that it pays in the long run.

One of the most interesting, though I cannot say it is the most pleasant, phases of commercial work is the photographing of show-windows. Unless properly handled, successes will be few and far between, and failures many. There is only one form of illumination with which I have found it possible to secure pictures of these windows without bad reflections. That is electricity. During the hours of daylight, a window picture without reflections is practically an impossibility; and, with them, the picture itself is worthless. The best results may be obtained when the windows are lighted with concealed incandescent lights. I never start an exposure until all the lights on the opposite side of the street are out, and although this makes it necessary to do the work after eleven o'clock, the improved results, and higher prices, more than repay

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me for the disagreeable features and loss of sleep. In a majority of cases it is advisable to have the glass of the window as nearly parallel to the plate as possible. If this is the case, and all of the illumination is inside the glass, the finished print will appear as if there was nothing between the lens and the objects in the window. The amount of exposure should never trouble one after the first attempt. In all such work as this I keep a careful record of plate used, time of exposure, and stop. In that way, when next I have to photograph a particular window, by referring to my record, all guesswork is eliminated, and I know just what is necessary to secure a fine picture. Of course, I always use non-halation plates for this work, and develop in a rather dilute solution. This is hardly necessary, though, with a window that is properly lighted; so little thought need be given this part of the work. The dilute

A SHOW WINDOW PHOTOGRAPHED AT NIGHT

developing solution is used more to help the detail than to prevent halation. With a plate the speed of Hammer's Blue Label or Seed's 26X, I find that ten to twelve minutes, with stop sixteen, will show good detail, even in the backgrounds, which are usually a dark green. Owing to such pictures having to be taken late at night, the work is worth more than the usual run of daylight exposures; and I always charge double for such night negatives, furnishing the prints at my regular price.

Photographing manufactured products is another class of work that will give the beginner trouble until a few essentials are mastered. Taking cast-iron articles as an example, let us consider grate fronts and baskets. These will invariably be painted a dead black, and yet full detail must be obtained in order to show every little relief in the ornamental work. Needless to say, full exposure must be given. Still more important are the direction and quantity of illumination that the object receives. Plenty of good, strong light, not, however, that of the direct sun, should illuminate the object from such an angle that every detail of the raised work shows up prominently, and casts a shadow

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just a little blacker than the color of the iron itself. An angle of about forty-five degrees is correct. Another thing that must be looked after very carefully in this work, is leveling; not only the camera, but the object itself. See that the center comes along a line which should be drawn down the middle of the ground glass. If it is impossible to secure this result with ordinary means, have recourse to the swing-back of the camera. Unless care is taken to have the object parallel with the plate, one end will be larger than the other, and a new negative will have to be made. A strong developer should be used to add to the very little contrast which such objects naturally show. The background in these negatives will have to be blocked out; and a ruling pen such as draftsmen use, together with a transparent triangle for ruling the straight lines, will come in very handy. In fact, when a grate basket is the subject it is very hard to get every line true, in that part which is open, unless these helps are used. As an aid to blocking out, place a white or nearly white sheet under and back of the object to be photographed. This will, in the negative, show exactly where the parts are that must be blocked out, as well as those which must be left alone. To my mind, all such work should be printed on glossy paper and ferrotyped, whether for reproduction or not. This finish gives a depth and brilliance to the finished work that can be secured in no other way.

A CAST IRON GRATE FRONT

While for this particular class of subjects I advise a direct-front view, you must not understand me to mean that all such work requires this viewpoint. In fact, almost everything, except flat objects, requires an angle of from forty-five to sixty degrees, to be presented in the most acceptable manner. Tables, chairs, trunks, and the like, would present a most unpleasant perspective, or lack of perspective, if photographed directly from the front. And this brings me to another important matter involving perspective. The use of lenses of short focus, or what are called wide-angle lenses, is to be discouraged in every case where a lens of normal or longer focus can be used. The shorter the focal length of the lens, the greater will be the difference between the parts of the object nearer the camera and those in the rear. The longer the focal length of the lens used, the more satisfying the perspective appears. This is

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USING PROPER LENS

USING WIDE ANGLE LENS

especially true when photographing objects that contain prominent lines in different planes; furniture, for instance. The manufacturers of wagons and automobiles insist, and with good reason, that the four wheels appear as near the same size as possible, and will not accept photographs in which the difference in size is often so great as to seem ludicrous. The better result is secured by using a lens of greater focal length, and working at a greater distance from the object. If one does not happen to own a lens of suitable focal length for this class of work, he may resort to the back combination of his normal lens, using a smaller stop. The improvement in the drawing will be very noticeable. Two of the photographs, those of the Hupmobile, reproduced with this article were made to show this difference. In making the first, the lens was the back combination of a twelve-inch symmetrical anastigmat, which gave me a focal length of practically twenty-four inches. The second was made with another fine anastigmat of seven inches focus. The difference in the drawing is very pronounced. The difference in the relative size of the wheels is quite apparent, but the reader will also notice the difference in their apparent positions, although the car was not moved in the least between the two exposures.

One of the most interesting branches of commercial work is the making of series of photographs showing the different processes in the manufacture of a certain product. One such, that I have just completed, shows the manufacture of hosiery, from the raw cotton, as it is shipped into the mills, through all the processes of cleaning, spinning, weaving, dyeing, packing, and the like; the last photograph showing the huge cases of the finished goods being loaded into the cars before the factory. While interesting, this branch of photography can present more difficulties to the square inch than any other which I know. Light, and the lack of light, will, in turn, confront the photographer. In all work of this kind, leave your camera at the studio the first trip you make. Look the ground over carefully with one of the officers of the concern, and have him explain just what is wanted and where each picture will have to be taken. Then go over it again, explaining to him, in detail, what will have to be done to prepare for your coming. Point out what windows it will be necessary to block up, and those that must be left open. Show how the goods and employees must be placed, and arranged to secure the best results. During this visit, decide just what you must bring with you to do the work. Be sure that you bring everything that *is* needed, and be just as sure that you leave behind

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everything that is not. Wherever practical, make time exposures, leaving the flashes till the last. Even when there are people in the picture, you will find that you can often avoid the use of the flash machine. Watch the people closely and give as much exposure as possible. In time, some one will be sure to laugh; but you can see it coming and close the shutter in time to save the plate and get the maximum exposure. My reason for not using the flash more than I do in this work is that in each room there are generally several pictures to be made, and if you fill it up with smoke, it will be necessary to either wait until it becomes clear or go to another room to make the next exposure. Both plans are unsatisfactory. One of the most difficult features of this work is making the employees understand that the picture-taking is as much business as their daily work. Before an exposure I always explain to them what I want. I find the best plan is to be as pleasant as one's patience will allow, without becoming familiar. This last you will find to be as fatal to success as being cross and overbearing. And finally, good results will depend, more or less, on the printing, quite as much as in making the negatives. With the light uncontrolled, or nearly so, in spite of all you can do, some parts of almost all of your negatives will be much stronger than they should be, and others much weaker. After these have been worked on to the extent of your ability, you will find that much dodging will still be needed in the printing. Almost all such work that I do is printed on printing-out paper, as that seems to lend itself much more readily to shading than its cousins, the gas-light papers. This is the only occasion on which I use the printing-out paper, except for proofs.

While I do not find it necessary to resort to any great amount of dodging, there are few negatives but what can be improved by a little work. A high-light may be too dense, or a shadow too dark. Ground-glass substitute, tissue paper of the onion skin variety, blue water color paint, vaseline, and a little dry yellow color are the needful articles for this work. If I have a negative in which the contrasts are too pronounced, I flow the glass side of the negative with ground-glass substitute; and then, with a knife, or with a tuft of cotton dipped in alcohol, I remove it from the highlights, allowing them to print deeper in proportion to the shadows than before. If some of the highlights are still a little too dense, a little vaseline, rubbed on the tissue paper which should cover the frame in all such printing, will allow more light to reach the part that requires it. If the shadows still print too dark, a little dry yellow rubbed on the tissue will hold them back still more. If only a spot or two need holding back, it is not necessary to use the ground glass substitute; a little yellow, applied directly to the tissue over these spots, will achieve the desired result. Dense spots may be printed through a hole cut in a piece of cardboard, a piece large enough to protect the balance of the negative from the light. I should imagine that this work on the back of the negative could be done much better and more easily with an air brush, and I may, at some future time, furnish the Editor with some notes on the subject.

The commercial photographer has one particular difficulty to avoid or overcome, that troubles the portraitist but little; and that is halation. It is claimed by some that this defect is present in all negatives made on ordinary

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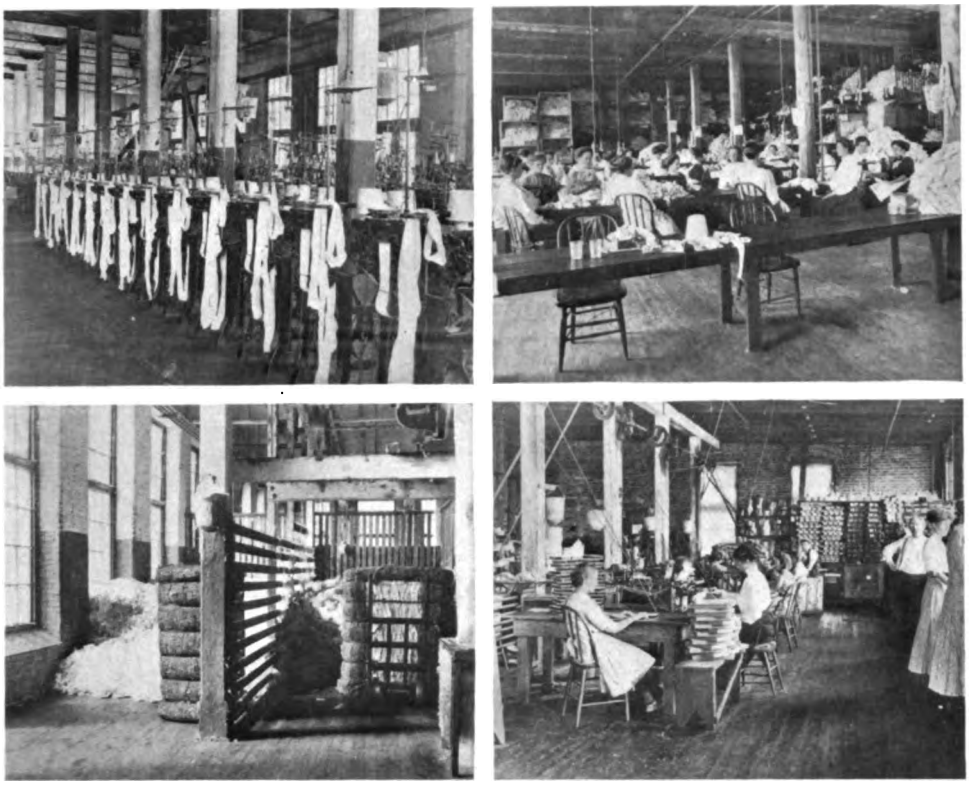

FOUR OF A SERIES SHOWING MANUFACTURE OF HOSIERY

plates, being more or less apparent in direct proportion to the contrasts of the picture. As we already know, the light penetrates through the film of the plate, strikes the glass support, and is reflected back into the emulsion; thus making what is, in reality, a double exposure of such parts. More halation will exist if the glass of the plate used is thick than if it is thin. This, on account of the increased angle of refraction, due to the thickness of the glass. Numerous methods have been advanced, by plate makers and others, to overcome this difficulty. Almost every manufacturer now has a so-called non-halation plate on the market. In most cases it is double-coated; the coating next the glass being a slow emulsion, while that on the top is of the rapid variety. The contention is that the exposure can be completed before the strongest rays of light have time to penetrate the slow emulsion and be reflected back. These methods of preventing halation seem perfect in theory, but for myself, I have never been able to fully secure the results with non-halation plates that their makers claim. One great advantage that I find in their use lies in their latitude. The slow coating will take care of any reasonable over-exposure, while the fast upper emulsion will give satisfactory results with very short exposures. It is claimed, by some, that the ordinary non-halation plate is not as fast as the regular plate of the same listed speed, for the reason that the light reflected by the glass support is lost. Whether this is so or not, I would not attempt to say.

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Almost as many methods of overcoming halation have been advanced as there are means of preventing it. Among them may be mentioned local reduction; reduction with persulphate of ammonia, which reduces the highlights before attacking the shadows; and also a method discussed some time ago, called rehalogenization. This last is defined as "a process for restoring a completed negative to nearly its original condition—before development," after which it is re-developed, stopping before the halated portions have had time to regain their former full density. As the silver which has received the action of this reflected light is deep in the emulsion, and next to the glass support, it seems foolish to attempt to remove it by means of reducers acting only on the surface of the film. Therefore, the latter remedy seems most rational.

All this work, though, is pure waste of time if ordinary care and thought be used while making the exposure, and during development. In reply to this, you may say, halation is bound to appear under certain conditions over which we have no control. My contention is that we *can* control these conditions, if we will. The method I employ, which, by the way, I do not claim as original, is, in a way, akin to rehalogenization; but I get rid of the halation in the first development, and in that way avoid re-developing, re-fixing, re-washing, and re-drying; all these being necessary if the former method is used. When I have a picture to make, in which halation is likely to appear, I make it a point to over-expose the plate. In developing I use a concentrated developer; and, as soon as the first highlight appears on the back, stop development. Fixing and washing follow as usual. A good, strong negative, with plenty of detail, will result; but there will be absolutely no traces of halation. The use of non-halation plates is not essential to good results when using this method. I can secure better negatives on regular plate, using this method, than I can on non-halation plates used in the ordinary way. However, I use the double-coated plates almost entirely, on account of their latitude, an advantage which was mentioned in a preceding paragraph.

A few words as to the whys and wherefores of this process may not be amiss, so I will give what I think are the causes of the combined action of exposure and development, as outlined above. It is a well-known fact that the more concentrated a developer is, the harder it will work; or, in other words, the more contrast it will give. This is proved, in a way, by the opposite fact that a weak solution is always recommended for under-exposures and for those negatives in which undue contrast is apt to appear. Now, my theory is, that a certain amount of over-exposure, treated in a developer concentrated to a relative degree, will produce a certain amount of contrast. This degree of over-exposure, and the necessary concentration of the developer to produce the results desired, will have to be found out individually, but one's first exposure along this line should furnish the needed information. My regular developer, metolhydrokinone, is composed of two parts stock solution and one part water; but for this special development I give from one-half to three-fourths more time, and use the stock solution without any water added. This gives me just the results I wish.

The over-exposure is to give full detail in the shadows. When the exposed

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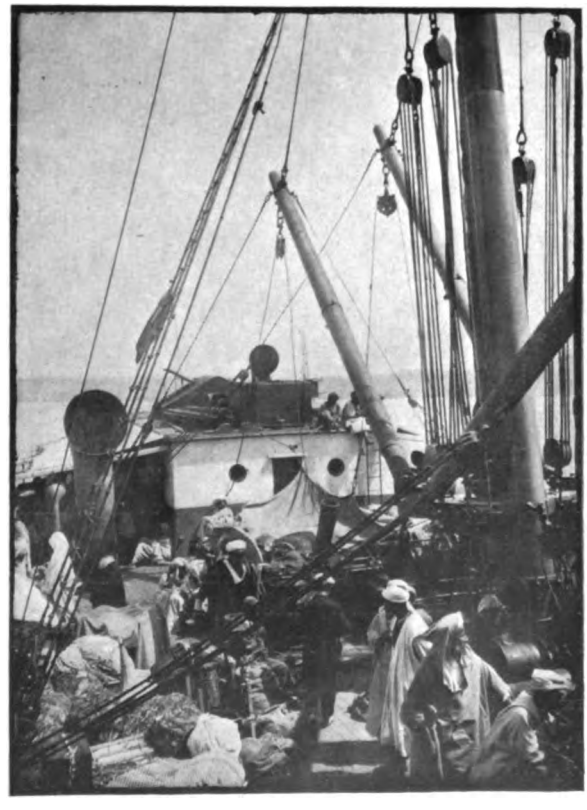
plate is placed in the developer, the action starts almost immediately over its entire surface, all detail becoming apparent at about the same time. The strong developer acts very quickly, and density in the highlights is gained very fast. When the first highlight shows through on the back, both the highlights and the shadows will be sufficiently dense, and development must be stopped at once. If it proceeds longer, halation is very likely to show. The plate is, in reality, under-developed, but the over-exposure has taken care of the shadows, and the concentrated developer has given plenty of contrast, but it has worked so fast that the halated portions have not had time to build up enough to show in the finished result. There is no lack of printing quality in a negative developed in this way, in spite of the fact that it is under-developed. The point of kinship between this method and that in which rehalogenization plays so prominent a part is that, in both cases, development is stopped before the halated portions appear. That is the main point in both methods, the other requirements being subordinate.

Where The Snapshotter Scores

By W. C. Howard

Amateur photographers are often reminded of the necessity of giving time and thought to the selection of their pictures, and of the superiority for this purpose of deliberate exposure with the stand camera. There is, however, one aspect of photographic work where the snapshot reigns supreme, and that is on board ship. The heave and swirl of the sea, even on a calm day, sets in motion both the camera and the objects at which it is directed, and this double movement makes short exposures imperative. Fortunately, with a good light and some accurate means of determining the correct exposure, which, within the limits of what is called instantaneous work, may vary from one one-thousandth to one-fourth of a second, it is possible to get some charming results.



PILGRIMS RETURNING FROM MECCA

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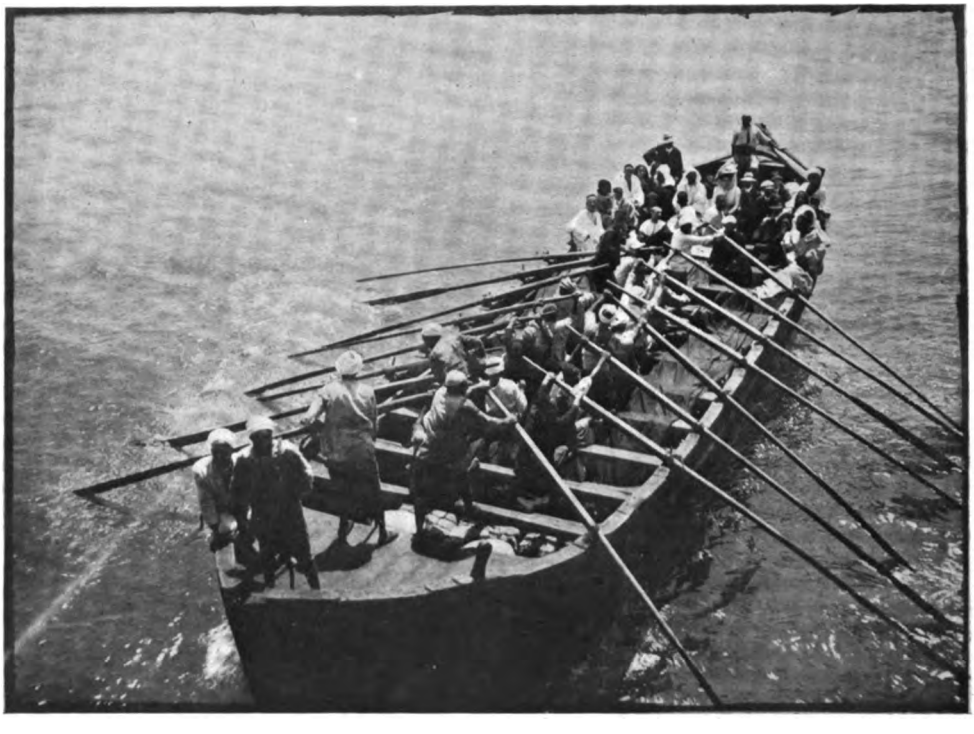
The accompanying photographs were taken off the coast of Morocco, that interesting and mysterious corner of Northern Africa, which, although geographically close to Europe, has resisted in a remarkable degree the veneer of modern ideas in regard to the costume and habits of its people. The hardy race of seamen and fisherfolk who inhabit the western shores of Morocco, between Rabat Sallee and Mogador, are, many of them, actual descendants of the Moorish pirates who were the terror of traders and merchantmen along the seaboard for many a year.

The illustration below is a reproduction of a photograph of a native pas-



PASSENGER AND CARGO LIGHTER AT RABAT SALLEE

senger and cargo lighter at Rabat Sallee; it was taken at 10:30 a. m., July nineteenth, in a brilliant light, exposure one-twenty-fifth second, stop f-16. The exposure was calculated by means of a Wellcome Exposure Record Calculator, using special table for latitude 30°.

Further south, on what was once called the Iron Coast, from its rocky and inaccessible character, lies Agadir, a port from which many pious Moslem pilgrims set forth every year to visit Mecca, the sacred city of Mohamet, where the prophet was born and near which is the cave where he is said to have received the Koran from the angel Gabriel. The first picture herewith is reproduced from a photograph of deck passengers on board R. M. S. P. *Agadir*, many of them pilgrims returning from Mecca. This was also made by determining the exposure by means of Wellcome Exposure Record Calculator, using special table for latitude 30°.

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Lantern Slides And Positives Direct

By H. D'Arcy Power, M. D.

We are fully justified in calling the special attention of our readers to the importance of this contribution from the pen of Dr. Power; marking as it does, the first appearance of definite information, based on actual experience, of a workable and satisfactory method of making positives direct from positives. As their letters show, no small number of our readers are interested in the possibilities held forth by the many suggested methods that have appeared from time to time, only to disappoint. We have seen a number of the slides produced as described by Dr. Power and can vouch for their high technical quality, quality that we do not believe could be improved upon by any other method of procedure.— THE EDITOR.

Old subscribers of CAMERA CRAFT will be aware that, during the past ten years, I have from time to time reported in my department, "A Photographic Digest," various proceedings for making negatives from negatives or positives from positives. Also that I have had to admit that in my hands these methods have failed. There are various reasons why a process of this nature is very desirable. First, there might be a saving of time; secondly, a saving of expense by the elimination of the intermediate negative or positive; and thirdly, the much more important advantage of retaining a perfect reproduction of the gradation of the original negative. For it must be admitted that it is very rare for a duplicate or enlarged negative to have the full scale of the original, and the same is true of lantern slides made from lantern slides or prints. Most efforts to solve the problem revolved around one or the other of two well-known principles: First, if a plate be greatly over-exposed in the camera, the image on development will reverse and finally appear as of the same character as its original. Much experimental work has been done to apply this fact in practice; but with little success. One part of an image reverses before the rest and the highlights may commence to re-reverse before the reversal of the shadows is complete; weak and foggy pictures being the usual result. Secondly, if the image produced by development, which consists of metallic silver, be dissolved by a solvent of that metal, and the unchanged residual emulsion be exposed to light and redeveloped, a reversed image is produced. In practice this always fails, for the reason that all plates are coated with a film of emulsion much thicker in the aggregate than the part affected by light in ordinary exposure and development, so that even the dense deposit caused by the highlights of the image does not utilize all the silver bromide of the parts of the plate whereon they fall. This unutilized silver, after exposure to light, develops up into fog and spoils the reversed image. Only when the film of emulsion is of extreme tenuity, as it is in the Autochrome and other color plates, is it possible to get a satisfactory reversal.

Shortly before his death in 1909, Dr. Douglass Carnegie published a method of making lantern slides direct, by taking the photograph through the glass, reversing with acid bichromate and redeveloping, but it was only recommended

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for line subjects. Last year, M. Balagny suggested a modification of the technique that more than half solved the difficulty. In place of dissolving out the first image, exposing, and redeveloping, he washed the plate after the first development and exposed it to the light so that the rays had to traverse the silver deposit of the negative image before that could reach the underlying unchanged emulsion; in this way the dense deposits corresponding to the high-lights effectively protected the underlying silver bromide. After an exposure sufficient to give full density in the shadows, the plate was taken back to the dark room, the negative image dissolved by acid bichromate, and after washing out the latter, redeveloped. There now remained the unchanged emulsion, which in previous methods had been the source of the fogging. This was easily removed by the fixing bath. Such in outline is Balagny's proposal, and experiment showed me that it gave results far in advance of previous methods; but notwithstanding the precaution of backing the plate with black paper, there was still some fog. Furthermore, the outlines of the image were laterally reversed. The fog seemed to be behind the image and could not be removed by Farmer's reducer without first attacking the same. I reasoned that if the picture were taken through the glass, as Dr. Carnegie had advised, although I had forgotten his technique at the time I experimented, the lateral reversal would be avoided, halation from the glass would be impossible, and any surface fog that might form would be accessible to a reducer without interfering with the deposit of the image.

It so happened that just at this time I had occasion to make a number of lantern slides to illustrate a lecture on photography as a fine art, and most were to be copies of carbon prints, photogravures, and good halftones. I needed a most exact reproduction of the tonality of the originals, and a process that would give me copies by one step, instead of two, promised a saving of at least one-half the usual deterioration. I started in, and for a while results were beyond all expectation. But presently troubles appeared; some slides were too dark and others too thin. Some showed very marked yellow coloration. It was evident that the factors of each stage needed study. There were the following points to consider: 1. The length or strength of the first exposure. 2. The depth of the first development. 3. The second exposure. 4. The nature of the reversing bath. 5. The clearing bath.

The first two factors are best considered together. It must be remembered that the first or negative image is to be removed, after which the residual silver will form the permanent positive image. If the first image is too dense, it will leave, on removal, too little emulsion wherewith to form the second, and the resulting positive will be too thin. If, on the other hand, the first image is too thin, the final positive will be dense and dull. This is the problem of the Autochrome development, and every color plate worker is familiar with it. In lantern slides, such as Lumière's and Seed's, the correct development is that which shall give a full detailed picture on the emulsion side (being exposed through the glass, the image builds from the glass upward). But it is not only necessary to have correct development; there must be equally correct exposure. If the exposure is too short, the final result

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LATHAM FLYING OVER SAN FRANCISCO BAY IN HIS "ANTOINETTE." JANUARY 7, 1911.
Copyrighted 1911 by CHARLES WEIDNER.

will be hard; if too long, matters will be still worse, for though we cease developing when the image has attained a certain density, there will remain over a residuum of undeveloped, but light, sensitized silver bromide, which will not be removed by the reversing bath; and, on the second development, it will appear and cause fogginess and a mixed image. Theory and practice alike demand that the exposure shall be so timed that the development shall tend to stop at the attainment of full density. Of the two evils, it had better be under-exposed than over. In practice, the worker soon acquires the necessary experience; that is, if he understands the why and the wherefore.

Next, let us consider the demands of the second exposure. We have a plate, covered, for the most part, with unchanged emulsion, but being a negative image next the glass, and we expose it to light through the glass. Where the heavy deposit, made by the highlights, lies, the light penetrates with difficulty; yet in time it will penetrate, and so sensitize any unchanged emulsion then present, which, on redevelopment, will fog the image. This is what always happened before Balagny suggested using the negative deposit as a screen. If we under-expose, the detail in the highlights will be lost and the resulting image will be weak. In my practice, I find that, with a well-graded and fully developed negative image, about three minutes in bright, diffused light will give a good deposit in the halftones and not fog the highlights. I have not found artificial light satisfactory. In regard to the reversing bath, I have found the acid bichromate better than an acid permanganate bath, but the

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bath should not be used more than twice in succession. It is very inexpensive and easily mixed, and repeated use of the bath leads to yellow staining of the gelatine. The redevelopment may be done with the portion of developer used for the first development; but on no account again use a developer that has been on a reversed plate, or strong staining of the gelatine will ensue. It required not a little experimentation to confirm these facts; but, once determined, I had no more trouble.

Whether I work direct from nature, from pictures, or make slide from slide (without unbinding), I get perfect reproduction of the original gradation. On the other hand, if I require a modification, it is within my reach by an application of the principles I have explained.

I will now give in order the working details: 1. Expose *glass side outwards,* so that full development may be obtained without fogging. 2. Develop for greater density than usual in a negative. 3. Wash for from three to five minutes. 4. Turn film side down in a pan of water, with a piece of black paper next the film, and remove into full daylight for from three to five minutes. 5. Return to dark room, remove plate, face up, to a bath of one-half per cent ammonium bichromate, acidulated with one per cent sulphuric acid. In three minutes the image will have disappeared. 6. Wash, in dark room, for fifteen minutes. 7. Redevelop to rather more than required density. 8. Fix in hypo. 9. Should, as is often the case, the surface be soiled by a slight deposit, one much like that on the surface of glossy developing papers, wash over with a little weak Farmer's reducer and it readily disappears. 10. Wash. The resulting slide should be identical in gradation with its subject. It can be reduced, intensified, or toned, like any other lantern slide.

DAFFODILS By DR. C. H. GARDNER

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A System For The Studio

By Percy King

With Illustrations by the Author

Mr. King, the inventor of the Percy King Light Controller, now on sale throughout the country and used in many of the best studios, advises that he used the Controller in making all of the pictures herewith, including our frontispiece. Mr. King writes that he was unable to send just the pictures that he would have liked to have furnished had it not been the busy holiday season when we called upon him for a few to use with this article.—THE EDITOR.

MR. KING LIGHTS UP

In putting forward this system I am not egotistical enough to think it is the "best ever"; perhaps many who will read this have a better; but I know that wherever it has been introduced the conditions have been greatly simplified, making the work much easier for everybody connected with the studio. Not only is there an entire absence of the work and worry attending the running about for this, that, and the other thing, but the party having charge of the office can always give an intelligent answer to any question that can be put by a customer concerning the work.

After the order is taken, the customer is handed a slip, to be given the operator, reading:

No. ..... Name .....

Address .....

CARD	CAB.	5X8	6X8	8X10	11X14	
P.						
Good						
Bad						

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This is marked with an x under the size ordered and it is well to put in the price in the blank marked "P," using a code if thought necessary, so that the operator is given an idea as to about how many plates he is justified in using. If the subject looks good for a speculative order, or a larger size than the order marked, put the letter "S" in the blank space as well. It is always advisable for the operator to have the subject's name so that he can speak to him by name, although, of course, a better way is for the assistant to bring the subject into the operating room and introduce him to the artist. After the plates are exposed the operator puts the slip on the last holder and, when changing, marks all plates with the same number as the slip until he comes to the next slip, and so on, making the numbers small on the side of the plates. The next morning a strip of gummed paper, one-eighth inch wide and four inches long, is stuck to the top of the negative on the film side and on this are put the number and name in ink, by whoever has charge of the negatives, and on the original slip is marked the number of plates exposed, any bad ones being so indicated in the proper column. The negatives and slip then go to the printer to be proofed, where the number and name are put on the back of each proof, and then the proofs and the slip go to the office. You will see that any one in the office will be able to answer any question regarding the number of plates, whether good or bad, and also be able to explain why the usual number of proofs were not turned in, should there be occasion for so doing.

But the most important part of the system is the handling of the negatives after the proofs have been made. Have a shelf made with twelve compartments, marked as follows:

0	10	20	30	40	50	60	70	80	90	No No.	HOLD

The negatives are all sorted and put in their respective compartments, face out, that is, the pen and ink strip at the top and to the front. Pay attention only to the last two figures of each number; thus, 1406 would go in the "0" compartment, 1562 in the "60" compartment, and so on. This makes it easy to pick out the negatives for any order; and mark the date that is on the proof on the outside so that at any time you might want one of these discards you will have only to look on the studio order book for the date proofs were returned and then turn to the box bearing that date. This last if you keep these discarded negatives. Should you take out one of these discards to print a sample from, as sometimes happens, a slip to that effect should be placed in the box to tell you why it is not there but among the registered negatives.

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A RESIDENT OF THE
"CITY OF ANGELS"
(Los Angeles, Cal.)
By PERCY KING

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A MODEST MAID
BY PERCY KING

The negatives ordered from being picked out, they go to the retoucher in a tissue envelope to avoid any danger of scratches; and from the retoucher they go to the printer. Both should have a pad on which is jotted down the number of each negative as it is finished. These slips are left at the office each evening and in the morning the one in charge of the office takes the retoucher's slip and makes an "R" after each corresponding entry on the studio order book and "P" after corresponding numbers on the same book. This being done regularly, should any one call for their particular work, the one in charge of the office can always tell just how far advanced the work is and estimate just how soon the work will be done, if not already finished. One can tell in just whose hands the negative is; and should the person usually in charge of the office be absent for the moment, any one else about the studio has but to look at the book to be able to answer any questions about the order.

Each morning the printer should first go over his prints of the day before and if any orders are short the required number of good prints, immediately make up the deficiency before going ahead with the regular work of the day. He then takes them to the mounting room, where the

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THE COQUETTE
By PERCY KING

one who does the mounting will find her orders on the back of each returned proof, the one in charge of the office having there indicated number of negatives, subject's name, style of mount, and any other necessary details; the one doing the mounting getting these proofs each morning from the office file where they were placed after the order was picked out. If any corrections are to be made in the negative, it is marked on the proof which goes to the retoucher, and is returned to the office as soon as he is finished with the negative. As soon as these orders are mounted and spotted and ready to deliver, they are taken to the office and pigeonholed in alphabetical order, with proof enclosed. The office assistant should then drop a card to each customer that has not specified the time he will call for pictures, informing him that his work is finished. This will save delay in delivery in many cases. The compartment marked "No No." is for negatives that have been made on speculation, or for friends of some good customer; these not being given a number until an order from them has been placed, when they will be given one and entered on order book. The "Hold" compartment is for such negatives as your customers have asked to have saved for a short time pending an order. This is not necessary if you save your discards as well as the negatives from which orders are at once forthcoming. When the order is obtained, take down all the negatives bearing that number, and, after selecting the one ordered from, put the discards in old plate boxes.

Now this may, in the reading, look like a lot of red tape, but you will find, when it has been introduced as a system and is in good running order, that it will save much time, a great deal of worry, and a large amount of unnecessary running around.

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Making Flashlight Portraits

By Charles H. Partington

With Illustrations by the Author

Mr. Partington advises, in a letter a few days later than the one accompanying this article, that he would like to add a few further suggestions, as the result of his even more recent essays into the delightful field of flashlight work. But, as the winter months seem most auspicious in which to enlist the interest of our readers in this line, he will not delay this article, sending the added suggestions in the form of a supplementary article, for the March issue.

It had been a long time since I took any flashlight portraits; but, on reading the editor's article in the October number of CAMERA CRAFT, my old interest revived, and I decided to go in for the work once more. My first steps were to secure some flash powder and a lamp, but they were easy, as I had decided upon "Victor" powder, and the lamp was decided upon in about two minutes after the dealer had shown it to me. This last is an inexpensive affair, costing me fifty-eight cents. The flash is set off by means of a trigger and cap; it is easily loaded and handled, and never fails to fire the charge. It is manufactured by George H. Fagan & Company, and called the "Spred-Lite." The "Victor" powder ignites quickly, gives a strong light, and, although it causes a little smoke, I have never found any traces of the disagreeable dust or powder afterward.

I use Cramer's Instantaneous Isochromatic plates, double coated, and they give very fine negatives. From my own experience I find double-coated plates absolutely necessary. The after treatment, developing, fixing washing and drying, is exactly the same except that there is a little more time needed on account of the extra thickness of the film; there is no backing or dye to fool with, and the results are equal to, if not better than, those on non-halation plates.

For developing I use Cramer's pyro-acetone formula, sometimes in a flat tray and at other times in a tank. The negatives from which the three pictures sent herewith were made were developed in a tray. Calling them first, second and third, in the order shown, they were made as follows: The first was taken with the flash four feet to the right of the subject, a foot and a half back, and two feet higher than the head. The camera was about six feet from the sitter, the lens stopped to U. S. 4, and eight grains of Victor powder used. The shadows in the portrait show exactly where the light was placed. The second was made with the light the same distance to the left, two feet toward the front, and the same height. On account of the dark hat the powder was increased to twelve grains. As before, U. S. 4 was used. The third was taken

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FLASHLIGHT PORTRAITS MADE IN THE HOME

with everything practically the same except that the powder was reduced to ten grains. The prints are on soft paper, developed with a soft working developer and should show the fine quality of the negatives.

A reflector, made of muslin stretched on a 3 x 4-foot frame, was used on the side opposite the flash, in each case. The lamp was used open, that is, without any kind of a diffusing screen, as the double-coated plates take care of that. I also use a hood over the lens, a Goerz Dagor of seven inches focus, and this hood I made from an old cardboard shoe box in about five minutes. It is about four inches long, and its sides are at such an angle that they protect the lens as much as possible without cutting off any of the image from the plate.

One thing I take care to avoid, and that is the glare of the flash in the sitter's eyes, so they will not have a stare. And I do not let them know the instant the flash is to go off. There is always a sixteen candle power incandescent light burning in the room, and when I am about ready, I open the shutter, talking to the sitter in the meanwhile, and as soon as an easy pose is taken, pull the trigger. Some will explain that they blinked, and others will "duck" their heads, as the flash goes off, but all this makes no difference, as it is impossible for anyone to move quick enough to cause a blur before the flash has done its work.

And as a final hint, having the sitter hold a lighted candle in the same plane as her face will enable one to secure a focus, easily and quickly. The electric light I mentioned is over ten feet away and its light is barely enough to give the outline of the figure on the focusing screen.

The three pictures I am sending are not submitted as particularly fine examples of portrait work, but merely as showing what can easily be done. Later, as I have more work from which to make selection, I could, no doubt, make a more creditable display. I will, in a day or two, send print from a

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negative just made, showing what can be done in the way of making childrens' pictures. The baby is only thirteen months old, hardly able to stand alone, so one can imagine how insecure was his perch on the horse, even with the wheels blocked. I had the shutter open, the slide withdrawn and held in front of the lens, while his mother got him steady in his seat. Then I shifted the slide aside and set off the flash. The horse is rather small, giving the child a rather Brobdingnagian appearance, but the mother likes it so much the better. But the point I wish to make is the sure and simple means provided by the flash for the taking of childrens' pictures. The data concerning the picture is as follows: Cramer's Instantaneous Iso plate; Cramer's pyro-acetone developer used in a tray; print on Special Rough Velox, developed with N-A liquid developer; lens of seven-inch focus, stop U. S. 4, using eight grains of Victor powder fired three feet to right, three feet to front and four feet above subject. The background was a white sheet hung over a frame.

POLAR BEARS—KENSINGTON ZOO

By A. T. MOLE, LONDON

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STEREOSCOPIC DEPARTMENT

Hints To Stereoscopic Beginners

By W. C. Marley

With Illustrations by the Author

One without any previous photographic experience had better acquire some with a one-lens outfit before plunging into stereoscopy. The many inevitable faults that abound in one's earliest negatives and prints have their marring effects intensified in stereoscopic work. Retouching is not advisable, sometimes only adding to the disagreeable sensation, when the slide is examined in the stereoscope. Partially fogged negatives, pinholes, specks, blisters, scratches, and the like, are all very annoying; and one ought to be able to make fair negatives and prints, and to at least recognize his own errors in composition, exposure and development, before taking up this specialty.

Assuming such to be the reader's case, some argument about the necessary outfit should find a place here. A film-stereo camera is convenient, compact. easily carried and loaded, and will satisfy the requirements of almost every

DAMP BUT DELIGHTFUL

By W. C. MARLEY

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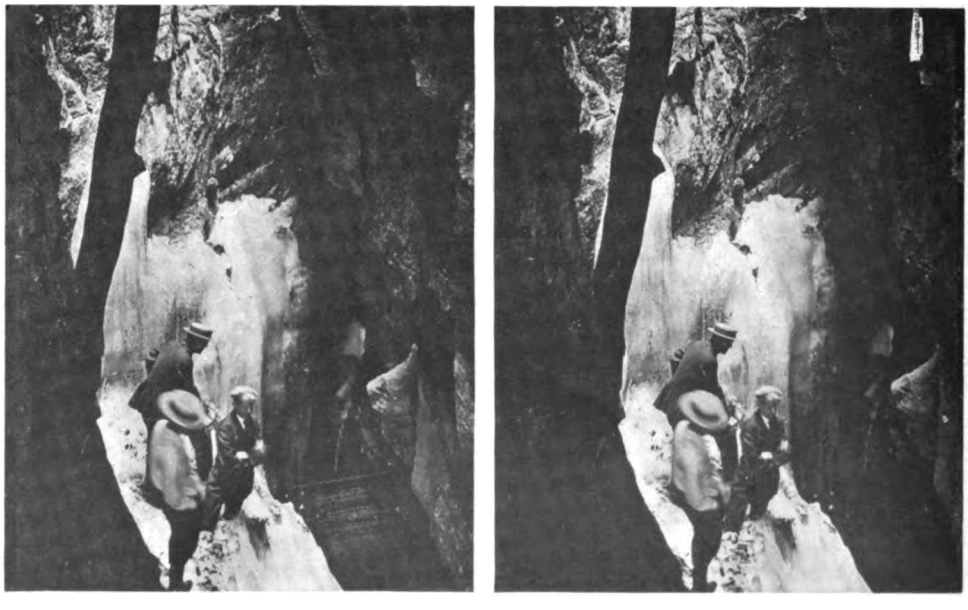
situation; at least for the man who makes stereoscopy merely an adjunct to his real hobby—ordinary or one-lens work. But the results will not come up to those secured from plates. Films seem more liable to various blemishes than plates, and, in addition, the six and one-half-inch length of film does not always lie taut in the proper focal plane, giving faulty definition in parts of the twin negatives. For serious composition one needs something more than the focusing scale and tiny finder with which a film-camera is generally equipped. If you mean to make stereoscopy your real specialty, buy a plate-camera, one with a regular ground-glass focusing screen. It is usually found fitted with a removable partition, and hence can be used for single-lens work, when desired.

As to lenses, shorter-focus ones have the advantages of greater depth of field, and larger fields over those of longer focus. That is, sharper definition over the entire field when at "general" focus; and, smaller images, hence more scene or view. These are advantages in stereoscopic work, and if two pairs of lenses are otherwise about equal in speed and corrections, choose the pair having the shorter focus. The lenses selected should be able to cover at least a three and one-half inch circle and cover it sharply.

Having procured your outfit, proceed to forget that art stuff! There must be no fuzzygraphs in this deal. Sharpness of definition in all planes is essential in almost all cases. Exceptions may include flower studies, statues and portraits, against neutral backgrounds. It is true, no doubt, that in nature we see sharply only that point and plane on which our vision is concentrated at the time; but, we have the power of continually changing from one plane to another, jumping from foreground to distance, and back again, in a moment. To imitate the effect of natural vision in this regard it is necessary to so



ICE CAVE—SHAWANGUNK MOUNTAINS By W. C. MARLEY

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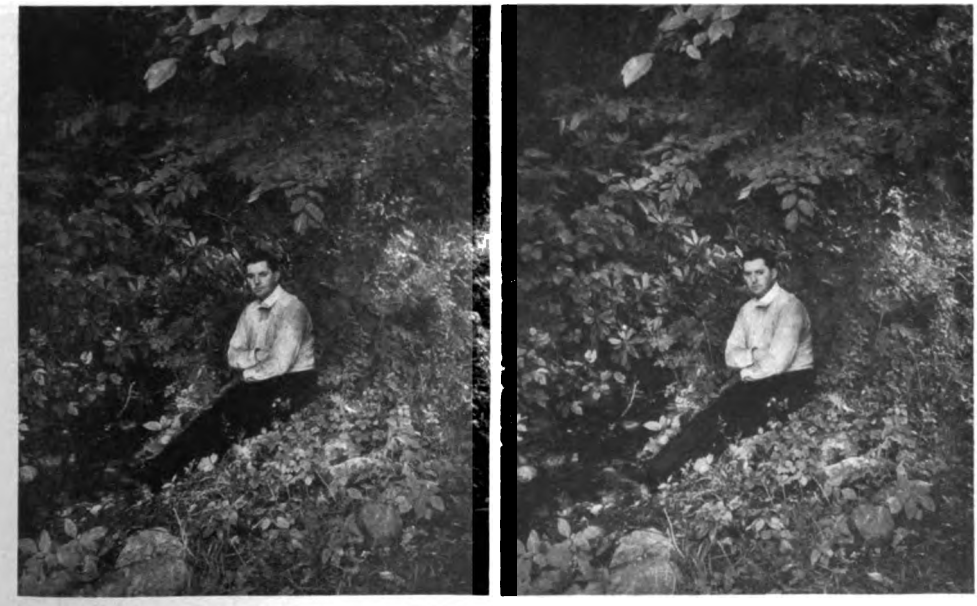
render objects in all planes, that each appears sharply defined when the attention, during examination in the stereoscope, is fixed in turn upon it.

This principle being accepted, it follows that the desired sharp definition in our negative should be preserved in the print; and this cannot be done perfectly if we use a paper possessing the least grain. The stereoscope magnifies the grain of even slightly matte surfaces sufficiently to produce the effect of a film or veil hung between the eyes and the scene. Nothing else seems so well adapted to our use as the glossy surface paper, the kind so abominated by the "artistic" worker.

Nearly every rule or practice in stereoscopy is based on the one main object, the perfecting of the finished result, the slide as it is viewed in the stereoscope. It avails little to have excellent composition and technique, if through errors in trimming your slides do not "register" properly. To avoid this last, be particular to trim accurately to identical base-lines, and so trim as to never exceed a distance of three inches between two identical objects or points, in mounting the twin prints. Of course, this generally necessitates the sacrifice of some desirable part of the view at the margins, but be generous and let it go. You will be able to pull the slides closer to the lenses in the stereoscope, thus getting the benefit of full magnification; and, fewer friends will complain about eye-strain when viewing your finished efforts. Do not include objects or material not present in both prints, except it be a very slight overplus on the inner margins, which last produces the so-called mask or window effect.

A great deal could be written on composition, lighting effects, depth of tone, choice of subjects, kind of paper most suitable, and many other things, but you will gradually acquire all that as you go along.



A STEREO PORTRAIT OF MR. MARLEY

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our subscribers responded so handsomely to our suggestion that they send us paragraphs for the first appearance of this new department that they would almost have filled our January issue had they all been given room. We hope to use the last of these first sendings in the next or March number. Consequently, all appearing in this and the following issue are entitled to equal honor with those who were represented in the January number. The first rush is now over, so kindly send in your contributions for following issues, to the end that the department may maintain its dimensions and interest.—THE EDITOR.

A POST CARD MASK: To the camera worker, who uses 5x7 plates, and makes two exposures on the plate, the following method of making and using a mask for neat white borders on post cards or other prints, may be of help.

After the plate has been developed, fixed, washed and dried, cut each negative in half, using a glass cutter and straight edge. We now have two negatives, which are 3½x5, and as a post card is 3¼x5½ in size, it will readily be seen that the negatives would not print well, using them as they are. To offset this inconvenient size, take a piece of heavy cover paper, or any medium weight opaque paper, and cut it 7¼x3⅞, as shown in Fig. 1.

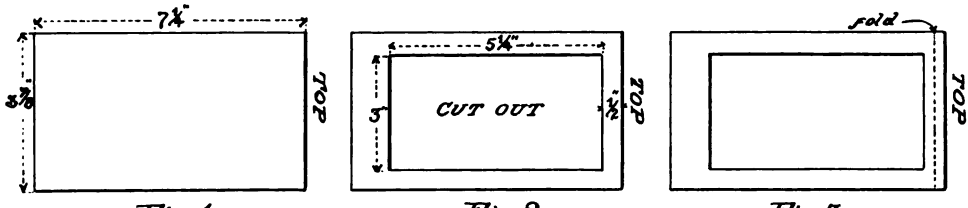

Fig. 1. Fig. 2. Fig. 3.

Using a sharp pencil and ruler, lay out a rectangle 3x5¼ in size, Fig. 2, one-half inch from one end of the sheet. After the rectangle has been laid out, cut it out with a sharp knife and straight-edge. A straight piece of glass will do for the straight-edge, providing the edges are smooth. Care must be taken in doing the cutting, as ragged edges on the mask mean fuzzy borders on the cards.

After the rectangle has been cut, take the straight-edge and a bone folder, and laying the straight-edge one-quarter-inch from the end having the narrowest edge, draw the folder along the straight-edge beneath the paper, so that a fold is made, as indicated by the dotted line in Fig. 3. The end will now stand at right angles to the rest of the mask. The mask being ready for use, take a clean piece of 5x7 glass; insert it in the printing frame and place the mask on the glass, the fold at the top butting against the top of the frame. The 3½x5 negative is now laid on the mask, the top edge also butting against the top of the frame. It will now be seen that the mask

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extends well beyond and below the negative, thereby protecting all of the card not being exposed through the negative. The card is placed on the negative, the top of the card butting against the top of the frame. The back is now inserted and exposure made.

The use of this mask will give straight, clean, parallel edges and true square corners. It also allows a saving of time, as a card can be inserted in the frame in less time than where a loose mask has to be adjusted. Using this mask, with an average negative, I have printed and developed ten prints in ten minutes.—J. E. S., Iowa.

A CONVENIENCE: About the handiest bit of equipment I have for my Kodak work is a clamp by which one can fasten his Kodak to the back of any ordinary chair. I prefer it to a tripod where chairs are available. It costs seventy-five cents.—F. E. H., Nebraska.

A HANDY WRINKLE: Cut a V-shaped notch lengthwise in the cork before inserting it in bottle containing bromide of potassium solution; then, if you discover that you need a restrainer, you can sprinkle a few drops in the developer, conveniently, even in total darkness.—F. B. O., New York.

INEXPENSIVE FRAMES: At the "Ten Cent Store" I recently found a neat little brown-stained picture frame and glass, enclosing a cheap picture, selling for ten cents. It was just the thing, even to the mat, for a sepia print in the 5x7 size, and I am now buying quite a few of them for my prints.—F. E. H., Nebraska.

CHANGING PLATES: To load and unload plate holders while traveling, procure about a yard of red wool flannel; and, at night, in your hotel or room, double it once, fold it around electric light globe, and fasten with pins. You will have an absolutely safe light to work by and one you will find, as I have found, very convenient.—Cactus, Oregon.

CLEANING DEVELOPER BOTTLES: I had always worked from fifteen to twenty minutes, using lye and shot, to clean the corrosion from the inside of my developer bottles. Now I use vinegar and salt, which cleanses every corner thoroughly, and leaves the bottle as clear as crystal. And, best of all, only one-tenth the time is consumed.—H. A. W., Ohio.

TO PREVENT PINHOLES: Blow a perfectly dry breath on the plate after inserting in holder; then, as an extra precaution, just before making the exposure rub the rubber slide briskly with a silk handkerchief; the friction will suck up all the dust off the plate on to the slide, then tap gently on the side of the frame and the dust will drop to the end of the holder.—F. B. O., New York.

MAKING FOCUSING SCREENS: In the October number of CAMERA CRAFT there was given a formula for making "Fine Grain Focusing Screens," and being always interested in anything new that promised something better, I tried it. The grain produced is very fine but the transparency is hardly sufficient for a poor light. I also found that different plates gave different results, the best being obtained with slow or "process" plates. I have found

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the following method an excellent one, and the grain can be made very fine by varying the quantity of benzole. The formula is as follows:

Gum sandarac	70	grains
Gum mastic	15	grains
Sulphuric ether	3½	ounces

Mix and dissolve by agitation; then add:

Benzole (not benzine)	6	drams

Both benzole and benzine are mineral products, but the two must not be confounded, as is often done. Benzine is distilled from petroleum and costs a few cents a gallon. Benzole, on the other hand, the refined product, while a by-product of coal tar, costs over a dollar a gallon. Take an old negative glass, clean it thoroughly, warm it to about seventy or eighty degrees Fahrenheit, and flow the varnish over. It is also very effective for negatives that print too dark in the shadows, as it can be applied to the back or glass side, over such spots, with a brush or a tuft of cotton saturated with a few drops. The brush method, owing to the rapid evaporation of the ether, is liable to give streaked results. Another tuft of cotton, dipped in wood alcohol, will remove the ground-glass varnish where not wanted. For sharper lines of demarkation the varnish may be scraped away with a sharp knife.—E. S. T., Ohio.

AN ALTERNATIVE DEVELOPER: Being one of the few unfortunates susceptible to metol poison, while liking the metol-hydroquinone developer, I was forced to work out a formula of my own, one without metol but giving the same results. I have used the below formula for some time with the best of results; and, as the editor can see by the card herewith, fine, velvety blacks are obtained on developing paper.

Ortol	20	grains
Hydroquinone	50	grains
Argo soda	1	ounce
Water	16	ounces

Some users may complain that this formula works too slow, but after sixteen years of experience as an amateur photographer, I believe a slow working developer the best. I use the above over and over again, as long as it will work.—G. T. S., North Dakota.

PRINTING BY AN OIL LAMP: I find so many valuable hints in CAMERA CRAFT, that I feel impelled to describe a handy arrangement that I use for printing gaslight papers. I take a piece of thin board, fourteen inches square, and cut a round hole exactly in the center, one large enough to slip over the lamp chimney. Across each corner I nail two cleats, about four inches long, and just far enough apart to hold the edge of my small, light 4 x 5 printing frames, so they will not tip over, and so they will always be the same distance from the flame of the lamp, which in this case is seven inches. I use a "Rayo" lamp, removing the shade, and bending the supporting wires so that they hold the board in position and just high enough so that the flame is on a level with the center of the printing frames. The frames should always be a distance away equal to the diagonal of the negatives. With larger frames the distance

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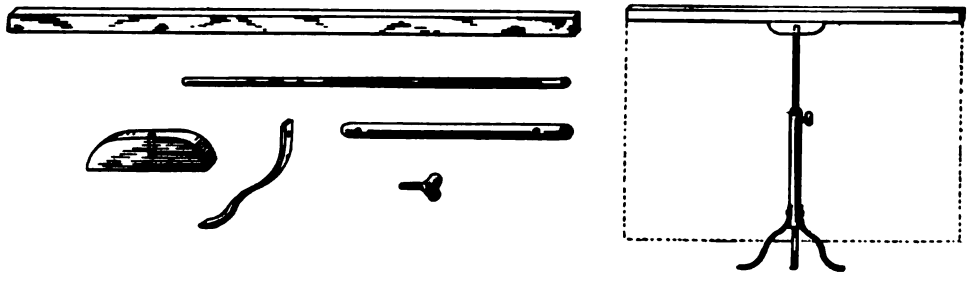
would have to be increased, but in such a case the weight of the frames would be too great, and, the board being larger, it would be well to fit it table-style, with a leg at each corner. Ordinary negatives take but one minute to print with this light, as against three minutes with an ordinary No. 2 oil lamp.—I. H. D., Kansas.

A PORTABLE BACKGROUND CARRIER: The several parts are shown in the sketch herewith. The longer one is a piece of weather strip, ½x2 inches, and as long as the background is wide, six feet in my case. This is nailed to a block, 1½x2, eight inches long, with the lower corners rounded off and a three-eighths-inch hole bored therein as shown. This hole takes the end of a three-eighths-inch iron rod about four feet long, and this in turn fits into a piece of three-eighths-inch pipe, two feet long. About one inch from the top of this



pipe a hole is drilled and tapped for a quarter-inch winged set screw to allow the background to be fastened in position when raised, lowered, or turned about at different angles. About two inches from the bottom of this pipe are drilled four more quarter-inch holes, equal distances apart, but a little out of line to avoid weakening the pipe, and four legs riveted thereon. These legs are six or eight inches long, and made out of half-inch flat iron. The sketch herewith should make all quite clear. It is an inexpensive carrier to construct and one that can be taken down and packed away in a small space when not in use.—H. L. D., Pennsylvania.

EQUALIZING CONTRAST: Recently I had to print from a portrait negative in which one side of the face was too strongly lighted while the other was in deep shade. Having only the "hard" or contrasty grade of paper at hand, straight prints gave only a soot-and-whitewash effect. As I could not get another negative without a great deal of trouble, I diluted my developer, added a small amount of table salt, and made a print with a good brown tone and well harmonized contrasts. Mounted on a brown card, the picture was a very satisfactory one.—"Marie," Maine.

MAKING A NON-HALATION PLATE: Make up a thin paint by mixing caramel, red ocher, enough dextrine to hold it together, and water, or a mixture of water and alcohol. The last if quick drying is desired. Paint this on large sheets of paper, dry, and cut up into suitable sizes. For example, cut the sheets 4¾x6¾ for 5x7 plates. When a non-halation plate is wanted, dab one of these sheets with a wet sponge until evenly moistened, and then squeegee to the back of an ordinary plate. It does the work perfectly and is

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but little trouble. It permits one to use the ordinary plate with which he is familiar, besides saving the buying of a box of non-halation plates, when perhaps only one is required. Using it, you can get thin skies on ortho plates, even when giving long exposure for dark landscapes. It is fine for snow pictures of all kinds. I have given ten times ordinary sunlight exposures on snow subjects and yet saved the sky so that it printed correctly.—W. D., Colorado.

PURPLE TONES BY DEVELOPMENT: A developer that produces purple tones on developing paper in the first development is made up as follows:

Sodium acetate	240 grains
Erogen	16 grains
Hydroquinone	32 grains
Ammonium carbonate	140 grains
Potassium bromide	20 grains
Water	16 ounces

Give twice normal exposure. Prints will develop in the above to a deep red; then place in acid hypo fixing bath.—R. R., California.

MAKE PERMANENT PRINTS: On a recent visit to a friend, the conversation turned to photography, quite naturally. He brought out his albums, containing the collections of some years, that he had made some time ago. On turning over the pages I found almost all of the prints on the printing-out papers, at that time popular, so badly faded that the identification of the subjects was impossible. Despite the many hours of toil, and untold quantities of paper and material used, these prints were so badly faded as to be useless. Many of the subjects were such that they could not be duplicated; they were of people who had died or moved away, of scenes about the farm that were priceless in the eyes of those who had been a part of the life portrayed, and others of subjects, that, had they been good prints, money could not have bought. Dear reader, are you giving the prints you are making to-day the care that will prevent their going the same way? Are you fixing them in fresh hypo for a sufficient length of time? Are you giving them a thorough washing afterward? Are you using every care to see that they are permanent? —T. P. P., Illinois.

BLISTERS ON DEVELOPING PAPERS: We do not often have blisters on our prints, but when they do come they are almost sure to come right in the best part of the picture. A few evenings ago I made some prints on developing paper, fixed them in fresh acid fixing bath; and, shortly after going into the washing tray, they began to blister all over, much as if they had the smallpox. As they had been in the acid fixing bath for fully twenty minutes, they must have been properly fixed, and the wash water was not colder than usual. Our city water is filtered by the alum process, so there should have been a hardening effect, if any. As an experiment, I took two of the prints that were badly blistered and squeegeed them onto a clean glass and left them to wash a little longer. Taking them out of the water, blotting them off, and allowing them to dry a little before removing from the glass, I found that the blisters had entirely disappeared. I would advise my co-workers to try this plan when

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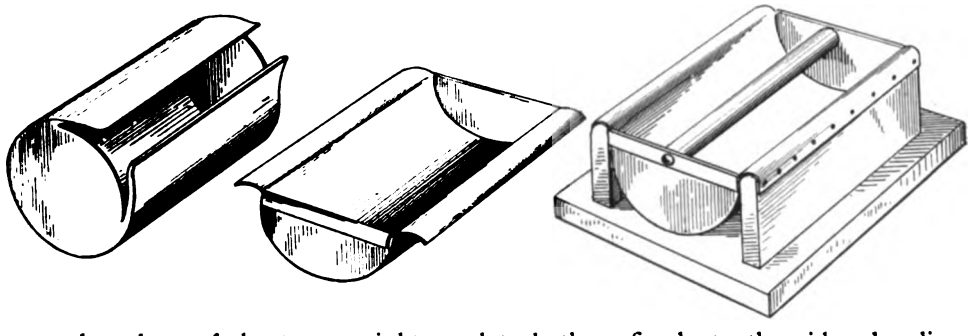
they are again troubled with blisters on their gas-light or bromide prints. It is understood that the prints are to be pressed firmly into contact with the glass while both are under water, and that the prints must not be allowed to become too dry before removing them therefrom, or they will stick. They should be quite damp when taken off. At an Eastman demonstration in this city, the question of blisters came up; and the demonstrator said there was no way of saving prints, once they had blistered. A young lady present said she could save them every time, but refused to tell us how it was done. If any reader should know of a way of doing it every time, I wish he would come forward with it, helping us all to avoid loss of much good material.—J. M. K., New York.

A TOMATO CAN DEVELOPING TRAY: Obtain a tomato or other can, five or six inches long and four inches in diameter; securing it before it has been opened, and cut both ends exactly half way around, keeping close to the edge as shown in the first sketch. Then slit it lengthwise on the open side as shown in the same sketch. Trim off the end pieces to within an inch of the center and cut off the surplus tin of the sides of the can, leaving enough to bend over and form the ends of the tank, as shown in the second sketch. The support, as shown in the last sketch, is made by screwing together three pieces of wood, the base piece being six and one-half inches square, and thick enough to make the tank solid and heavy. Bend the sides of the can



over the edges of the two uprights and tack them firmly to the sides, bending the tin so as to have a rounded surface that will not scratch the films. The ends of the can are bent over more sharply to form the sides of the tank. Then get a small, round wooden rod the length of the tank, place in position, and fasten with a screw through the tin at both ends. Lastly, give the whole tank two coats of black asphaltum varnish to protect it from the action of the developer. You will have a tank that will be a pleasure and convenience to use.—G. P., Tennessee.

CLEANING OFF OLD NEGATIVES: All amateurs at times have use for plain, unadorned glass. The usual method of obtaining a supply is by putting old negatives into hot water, and there soaking and scrubbing off the emulsion. The resultant "goo" is messy; and one always feels better when the job is finished. I use considerable glass as covers for lantern slides, and these covers are much more easily made than the slides. I take all material for "covers,"

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in the shape of rejected slides, and stow them away in a strong solution of washing soda. When I need a few clean cover glasses, I remove the desired number from the soda solution, rinse slightly, and put in a tray containing water to which a little common muriatic acid has been added. Acid and alkali don't get on well together, with the result that the film is lifted. Sometimes it floats off entire, but if not it can usually be stripped off, after starting one corner, in one movement, leaving the glass perfectly clean. I have used this method successfully for many years, even on the largest sized plates. Occasionally, though, one meets with a film that nothing short of sand-paper will remove.—Denise, California.

SOME HINTS FOR THE BEGINNER: I suppose the editor will say that he has no beginners on the subscription list, that they do not subscribe until they have made all the beginners' first mistakes. I once read in a photographic book that it was useless to advise the beginner what kind of an outfit to get, because the beginner never thought of getting a book until he had bought his first camera and found it was not all plain sailing. But let the editor stop and think that possibly a number of his readers might like to put a little good advice into the hands of a friend that he had been advising to take up photography. Of course, the beginner will take CAMERA CRAFT, but will he read it as he should? Read it, re-read it, and then read it over again. And by the time that is done, another issue will be along. And hunt up another amateur, the kind that likes to tell how he does things and, of course, that means just how it should be done. Do not follow his valuable (?) advice too closely, but listening to him talk will give you many ideas and pointers. Let him "ramble on." The best thing for a beginner is a small, fixed-focus camera using plates; about 3¼x4¼ or 4x5. Then get a complete printing and developing outfit, such as is sold for about two dollars. There is an instruction book included, and that must be read three times, from cover to cover, before opening one of the packages. Then read all the printing on the wrapper of each package before opening it, to be sure that the contents are such that white light will do them no harm. Examine the camera and plate holders and familiarize yourself with them before trying to make an exposure. Then take your plate holders, ruby lamp, matches, and the plates, go into your dark room or closet, shut the door, and watch a few minutes until your eyes get used to the darkness, and see if any white light creeps in from outside. The ray of light coming through the key-hole may cause much trouble. If any light creeps in, stop it out in some way before lighting your ruby lamp and loading the holders. Follow the instructions, put the plates in the holders with the dull side out or towards the slides, which protect them from the light. Cover up the rest of the plates by packing them back in the box, then go out, and you are ready to make your first exposure. Make two exposures of different length on the same subject, then read over the directions concerning developing once more, take the book with you into the dark room, and again follow directions. Success is merely a matter of following directions, using care, and practicing cleanliness in all the operations. And I will give a few more suggestions in some future number.—W. E. F., Pennsylvania.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1911 No. 2

Shop Talk

We were late with the last issue, and it was not really our fault. There were several causes, none of them quite important enough to cause the delay, but combined, the delay resulted. Most of our advertising contracts run out at the end of the year, and advertisers and their agents seem to forget that we are not next door to their offices in the East. Of course, we can print the body of the magazine if we know how many pages to leave for the advertisements, and then let copy come quite late; but when we do not know how many pages are going to be required, the problem becomes more difficult. Magazines are printed in what are called "signatures," that is, in sheets, which folded, make eight, sixteen, or thirty-two pages, and eight pages form the smallest practical addition. If we could ask the printer, at the last moment, to put in two extra pages the matter would be quite simple. The first two drawings for our new cover design did not meet with our approval and a new artist had to be given a rush order, and artists do not take kindly to them. A new style of headings, a new font of type for the body of the magazine, and other details requiring attention, were all in the hands of the foreman of the composing room at our printer's when he was called away by the serious illness and death of his wife. An article that was intended to be used had to be left out at the last moment and another prepared, along with the necessary cuts, to just fill the space. Circumstances certainly combined to cause a delay. We are going into these details because we believe our readers take a kindly interest in the magazine and will appreciate a little insight into the method of its production.

And the last number, as well as the present one, we trust will meet with your approval. There are two or three changes that must be credited to certain of our readers who suggested their adoption. Numbering the pages at the bottom assures continuous paging, so that the page will not be missing from those pages on which articles start or on which a full-page illustration is placed. The new department, "Paragraphs Photographic," is one that our readers seem to favor quite strongly, judging from the flood of contributions received. As to the manner in which it appeals to the non-contributing readers, it is too early to say, as we have not yet had time to hear from them on the subject. The other new department, the one devoted to stereoscopic work, can hardly prove so widely popular, owing to the surprisingly proportionally small number interested in this most delightful branch of photographic work; but, we trust that the articles and pictures given will inspire many of our readers to investigate its charms. We feel that the failure of stereoscopic

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work to receive the attention it merits, is, in no small measure, due to the want of information offered on the subject by our photographic magazines. This lack we shall endeavor to supply with the assistance of those enthusiastic workers making up the Stereoscopic Division of the International Photographic Association. We regret our inability to give the names of those who made the original suggestions for these new departures. In answering their kind letters we simply jotted down the suggestions, overlooking the importance of being able to give proper credit later. They have our best thanks, just the same, along with those whose equally kind suggestions were found impractical. The new cover, we hope, will meet with as much favor as did the old. The latter was discarded with regret, and discarded only because we felt that an occasional change would indicate more clearly our intention to avoid getting into a rut, and harmonize more nearly with our aim to produce a magazine that is fresh and progressive as well as entertaining and instructive.

Too late for comment in the last issue came several rather severe criticisms of our frontispiece for December. While each was given personal attention in a letter, there must be many others who did not take the trouble to write, although sharing the feelings of those who did. Before going further, however, let us explain that equally as many wrote us, commending the picture in the highest terms. Returning to the adverse criticisms, they were all due, no doubt, to a misunderstanding of the matter. Let us, for the moment, imagine a collection of pictures coming up before an exhibition jury. The usual procedure is for the members to seat themselves in a group at some distance from a small table or other support, upon which an assistant places the pictures, one by one. They are not examined as are our reproductions, by being held in the hand at the reading distance. Later, when the accepted pictures are hung upon the walls, they are still intended to be examined at a distance of several feet. To get the same effect in our reproduction of Mr. Bodine's beautiful picture as it would give upon the walls or before a jury, the reproduction, being somewhat smaller than the original, should be held at a distance of from three to four feet. So examined, we feel quite sure the critics will admit, it gives a finer rendition of the scene than would or could a photograph of equal size and like subject, made needle sharp throughout. The matter is one that we have wanted to explain many times, but we could not see our way to do so without condemning a practice which we ourselves generally avoid; namely, of placing before our readers, to be examined at the reading distance from the eye, pictures that should be viewed from a distance of a few feet. Mr. Bodine's article would have been quite incomplete without the reproduction of an example or two of this class of work, and our less experienced readers are entitled to an occasional example of the kind accepted by our exhibition juries.

One little request and we will close for this month. When you find an article in our pages that you feel will particularly interest a fellow worker, or when you find a fellow worker that you think will be interested in our magazine, give him your copy at once, give it to him as if you enjoyed doing so, and tell him he should subscribe. Then drop us a post card asking us to send you another issue of that date, and add your name and address. If you will

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also add the name and address of the person to whom you gave the copy, to the end that we may send him a subscription blank and return envelope, as so doing may keep him from forgetting the matter. We feel that you will do this quite often now that you know it will not result in breaking your files. And to those readers who have been preserving their copies but find one or two missing, drop us a line giving the issues wanted and they will be gladly sent. Later we may have to advertise for such certain issues and buy them back, and that will necessitate making a charge for them.

Mr. Dobbs and His Work In Alaska

B. B. Dobbs, well known to the older photographers on the Coast, is again in San Francisco, being on a lecture tour across the country to New York, intending to return to Alaska in the early spring. Mr. Dobbs has been located in Alaska, with headquarters at Nome, since 1900, working into the most northerly territory, including the Siberian coast. He has not been satisfied to conduct an ordinary photographic establishment; but, realizing the importance and value of a pictorial record of this new, twentieth-century country, its life and its people, he has applied his energy and photographic skill to securing such a record before the effects of civilization's inroads should have made so doing

A HERD OF WALRUS IN THE ARCTIC OCEAN By B. B. DOBBS
Taken off Cape Serge, Siberia, and about sixty miles from land.

impossible. His collection of portraits of Eskimo types, including those from Siberia, Cape Prince of Wales, the Behring Sea Islands, as well as Alaska, is not only full and complete, but of the most artistic quality. Sealing, walrus hunting, reindeer and dog sledging, ice floes, mining, fur industries, Eskimo life; in fact, every interesting feature of this "rim of the world" country, has been recorded by his camera. In addition to the mass of ordinary photographic work which he has accomplished, a moving-picture camera has been used to such interesting subjects as a big walrus hunt from the deck of a schooner amidst the floating ice fields, a remarkable battle with a huge polar bear, the

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annual dog race from Nome to Candle Creek, and like thrilling scenes. These form the basis of his illustrated lecture, "Alaska, the New World of the Twentieth Century." Mr. Dobbs can be addressed care of the National Geographical Society, Washington, D. C.

Mr. Nourse On The Coast

S. W. Nourse, representing Schering & Glatz, of New York, paid us a very pleasant visit early in January. Despite the fact that this is his first visit to the Coast, we find that he has made himself extremely popular with the trade. This is only natural and to hardly be expected otherwise. Combined with a charming personality, Mr. Nourse has an intimate and full knowledge of photography, particularly the chemistry thereof; as, despite his lack of elderly appearance, his experience in photography dates back to at least the close of the wet plate regime. Mr. Nourse advises that he has learned much concerning the wonderful possibilities of an increased business for his firm in this territory, a possibility that will, no doubt, be taken advantage of more fully during the coming year.

Fourth Annual Inter-Mountain Convention

The Intermountain Photographers' Association will hold its Fourth Annual Convention in Salt Lake City during the coming April, the exact date to be announced in our next issue. The executive board has some fine plans outlined for this coming convention; and, being made up of men who are enthusiastic and energetic, it will come very near making the next convention the best one ever held, as they promise to do. All desired information can be secured from the Secretary-Treasurer, C. H. Gutter, 25 East Third South Street, Salt Lake City, Utah. Every photographer in Utah, Colorado, Idaho, Wyoming and Nevada should send him their name and address in order that particulars may be received as the regular announcements are made from his office.

A New Local Stock House

F. T. King, for nearly a dozen years located at 23 Broomfield Street, Boston, has opened a photographic stock house occupying the entire second floor at 450 Market Street, this city. Mr. King will carry a small but well selected stock of photographic supplies, will do all kinds of developing and printing, and will specialize in buying and selling second-hand cameras and photographic apparatus. His long experience, his business-like methods, and his pleasing personality, assure him a good measure of success in his new location. Knowing Mr. King personally, we can recommend him to our readers, assuring them that they will be well repaid by visiting the new store.

The Next Northwestern Convention

The Northwestern Photographers' Association will hold its Seventh Annual Convention in St. Paul, Minnesota, at the Armory, the St. Paul Hotel being headquarters. The date just decided upon by the Executive Board is the week of July twenty-fourth. Local enthusiasm is such that a rousing and hearty welcome is assured.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

PHOTOGRAPHING BY INVISIBLE LIGHT

As is well known, the light which surrounds us consists of waves in the ether, and these waves are of different lengths, one of the qualities connected with the wave lengths being color. Thus red light is of a different wave length from green, and green from blue. Over and above the light to which our eyes are sensitive, there is light which, while darkness to us, is, to certain sensitive media, as much light as the rays which the human eye can perceive.

These invisible light rays are described by scientists as "infra-red" and "ultra-violet," according to whether their wave lengths are longer or shorter than the wave lengths of red or of violet light which are the boundaries of the visible rays.

Plates can now be made sensitive to the "infra-red" rays, while without any special steps, the ordinary photographic plate is very sensitive to the "ultra-violet," so that it is possible to photograph subjects by a light in which the eye has never seen them.

The use of orthochromatic plates and suitable light filters enables us to obtain photographs which are strikingly different in their relative tone values from those which can be got on ordinary plates.

The ordinary plate used in the ordinary way records the impression of the object as if it were illuminated by blue and violet light only; to the red and yellow it is almost color blind. If we have a deep enough color screen and a red sensitive plate, we can go to the other extreme, and record the object by red and yellow light entirely, or we may hit a mean between the two, and get a mixed impression corresponding to what the eye sees.

But latterly we can even go further than this, and by suitable means can exclude the whole of the rays to which the eye is sensitive, and when working either with the "ultra-violet" or "infra-red" the differences, as might be expected, are still greater.

Professor R. W. Wood, at the International Congress of Photography, described some of the results he had obtained in this way.

Ordinary glass, as is well-known, stops a great deal of the ultra-violet, so that a lens of quartz had to be used, and in order to exclude the visible light a coating of metallic silver was deposited on this quartz lens until to the eye it was almost opaque. A very strong light could just be seen through it, and then had a deep violet color. Yet this "opaque" lens transmitted a great deal of light to which a plate was sensitive, and things could be photographed through it quite easily.

The result with it with landscapes generally was not very different from the ordinary, but with certain colored objects striking alterations appeared. For example, Chinese white pigment reflects none of this ultra-violet light, while certain white flowers, such as phlox, behave similarly. So that had our eyes been sensitive to the "ultra-violet" rays, stopping short where, as a matter of fact, their sensitiveness begins, we should be living in a world in which what we now call white we should then describe as black. Whether the reverse would hold true or not is another matter; but it is easy to imagine substances which we now term black, which in that case would reflect the rays that affected our eyes without altering their proportions, and such substances we should call white.

When instead of ultra-violet light, "infra-red" is used, common objects are very much altered. A plate has to be specially sensitised for these radiations, and a suitable "color screen" has to be used on the lens to exclude all the visible light. A very dense cobalt glass with a suitable red dye, or with a solution of potassium bichromate, was used by Professor Wood.

The result of this on landscapes was

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very curious. "Grass and trees in full sunshine appear snowy white (we quote from "Nature"), and the sky as black as midnight. All shadows are very black, as there is practically no light from the sky to illuminate them."

This experiment is little more than carrying to an extreme an experience some photographers have had in their own work, when by the use of too deep a color screen, by "over-correcting" as it is called, the greens in the landscape come out much too light. But it shows how very different everything might have appeared had our eyes been sensitive to some other part of the spectrum.—"Photography."

AN IMPROVED METHOD OF PYRO DEVELOPMENT FOR BROMIDE PRINTS

By many experienced workers pyrogallic acid is regarded as a developing agent which has not yet been surpassed for the production of negatives, but its propensity for staining has hitherto kept pyro out of the list of developers available for bromide papers. The following method will be found to give prints of a richness not easily attained with the developers at present in use, and particularly pleasant sepia tones are obtained by subsequent toning in the popular sulphide bath. Four solutions are required, viz.:

A: Water ..... 20 ounces
Potass. metabisulphite . ¼ ounces.
Sodium sulphite cryst. 3 ounces.
Pyro .....160 grains.

dissolved in that order. The water in the case of A and B should have been previously boiled.

B: Water ..... 20 ounces.
Sodium carbonate ..... 4 ounces.
C: Water ..... 20 ounces.
Sodium chloride (household salt) ..... 2 ounces.
Sulphuric acid ..... 1 ounce.
D: Potass. permanganate....
.....five per cent sol.

A normal developer consists of: One part A, one part B, and one part water.

Before commencing operations add to twenty ounces water, one-half ounce C and one-half dram D; this mixture may be designated E.

When development is complete, rinse the print in water for thirty seconds, then immerse in a dish containing a liberal supply of E for the same period; again wash for about a minute and fix in acid hypo. Fresh developer should be mixed for each print, as when used repeatedly the color of the deposit deteriorates; a fresh supply of E must also be used each time.

Precisely the same procedure will give results of great beauty with lantern plates, but if the variety used is "gaslight" or "slow contact," the developer is composed of equal quantities of A and B only.—D. Ireland, in *Amateur Photography.*

A NEW PIGMENT PROCESS FOR PICTORIAL WORKERS

Malcolm Arbuthnot, publishes in the *Amateur Photographer,* the process described below. The use of gelatine for the purpose of making a pigment print without reversal is not new, and this department has previously described such, but the mode of adding the pigment, is, I believe, a novelty. Mr. Arbuthnot says:

"For years I longed for a printing process which would allow of a large amount of control, and yet retain something of the unique 'quality' which is distinctive of photography.

"I did not want the grainy qualities of gum, or the soapy, greasy effect which so often obtains with oil; in fact, I took as my ideal a good platinum print on rough paper, which, to some extent, was realized, as prints made by the process about to be described have often been mistaken for platinum.

"Although this process is allied to gum-bichromate, it is quite different, and gum arabic does not enter into its composition. As a matter of fact, the result of a great many experiments proves that gum is the least suitable of all the available colloids.

"The first operation when preparing paper for this process is to see that it is well and properly sized; and if spirit sensitizing be adopted, it is essential that the paper be heavily sized, otherwise the sensitizer will penetrate the paper in spots.

"It will be found advisable to purchase a paper ready sized; what is known as a tub-sized variety being the best, a good sample of which is the Landseer cartridge.

"If it is desired to adapt other papers, they must be sized with arrowroot resin, or preferably chrome alum and gelatine, as

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used for making single transfer paper for the carbon process.

"It is important that the size be applied from the back of the paper, so that it can soak well in, but does not choke up the pores on the side to be coated. If this be too hard, there is nothing for the coating to hold to.

"The coating mixture is composed of:

Nelson's No. 1 gelatine...15 grains
Lump sugar .....15 grains
Water . ..... 1 ounce

"After a preliminary soaking, the gelatine and sugar is melted by gentle heat, taking care not to exceed 120 degrees Fahrenheit.

"It must then be cooled to about eighty degrees Fahrenheit, at which temperature it must remain until all the paper is coated.

"The paper is cut to convenient size, and pinned flat upon a clean drawing-board, which can be scrubbed after use.

"A camel-hair mop, previously well soaked to prevent the shedding of hairs, is used to apply the gelatine solution, which should be used plentifully and worked into the paper until it froths.

"Now take a large piece of butter-muslin, previously well washed, and remove the superfluous gelatine with a light polishing motion, until there is a thin, even film over the paper, then hang up to dry and proceed with the next piece.

"When several sheets of paper have been coated, or after the expiration of half an hour, the first one must be recoated. As a rule, two coatings will be sufficient, but three, or even four, can be used.

"A good test for the coating is to lick the paper when dry. It should feel quite smooth and slimy, and should taste quite sweet. An appreciable time should elapse before the coating is licked off and the tongue reaches the rough paper beneath.

"After the paper is thoroughly dry, which will take several hours, it can be coated with the pigment, or it can be kept and pigmented at leisure. The pigment is plain water-color paint, in tubes. Fancy colors should be of better quality, or there may be trouble from the color bleaching under the action of the bichromate.

"Squeeze out two or three inches of pigment and slightly thin with water until it is quite liquid, but absolutely opaque when spread upon white paper.

"The pigment is now spread upon the gelatine coating by means of the camel-hair mop, and after being well worked upon the surface of the paper, the surplus is taken up by the application of a badger-hair softener.

"The proper use of this tool will only come with practice, but it is not sufficient to pass it once or twice over the surface, as in gum-bichromate, but the brushing must be kept up until the paper is surface-dry, extra pressure being applied to the brush where any excess of pigment forms upon the paper.

"When dry, the paper presents a perfectly matt, opaque appearance by reflected light, but by transmitted light the grain of the paper should be visible through the coating, which should be quite even, although slight inequality will not give serious trouble.

"After the paper is again dry, the pigment should be easily licked off, leaving the paper quite white, and with still a trace of gelatine and slight sweetness to the taste.

"It can then be kept indefinitely or sensitized for use, which must be within twenty-four hours; otherwise, owing to the thin film of colloid, insolubility will set in. Sensitizing can be performed by immersing the paper in a one per cent solution of ammonium bichromate for one minute, and drying spontaneously in the dark, or, preferably, by the alcohol method using the following formula: Ammonium bichromate, soda carbonate, and water. For use, take one part of above and three parts alcohol. Methylated spirit of good quality can be used, but is not recommended.

"This solution is brushed upon the coated surface, taking care that the brush marks overlap each other. When the surface is covered, it may be gently evened with a badger brush.

"It will be dry in about ten minutes and must be carefully protected from the light, as it will be about twice the rapidity of printing out paper. The negative must be a good strong one, such as would be suitable for carbon, and not at all like those used for gum-printing.

"Exposure must be timed with an actinometer, and printing done in the shade, on account of the rapidity of the paper.

"The print is now immersed in warm water, face downwards, special care being taken that the back of the print does not rise from the water, in which case a dark

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mark will be found on the print. Small pieces of flat wood will be found useful to float on the top of the print to prevent this happening. After ten minutes' soaking, development can be proceeded with.

"The most suitable method of developing is to place the print on a piece of glass supported on an easel, and develop by means of a spraying bottle (as used by hairdressers) filled with hot water. If much work is to be done, it will be advisable to purchase a foot pump to which the spraying bottle can be attached.

"Developing these prints is a most delightful operation, and, except in the case of great under-exposure, the pigment is perfectly firm, and will stand quite rough usage. There is no flaking off, as in gum, and development proceeds evenly and accurately every time; and, unlike other pigment processes, there is quite an appreciable latitude in exposure.

"If under-exposure is suspected, development can be commenced in cooler water, raising the temperature as may be necessary; while for over-exposure very hot water may be used, and prints very often saved by the addition of a little washing soda to the soaking water.

"There is no need for any clearing or hardening bath, and the prints can be dried at once before a fire.

"This process can be used in combination with a platinum print if desired, and it will be found a great improvement over the experiments previously described when gum arabic was used as a colloid.

"The somewhat objectionable gloss is entirely obviated, and unless an exceedingly strong effect is required one coating is quite sufficient. Should such a case arise, it will be found advisable to make the platinum base a little stronger and to apply plenty of color when pigmenting.

"This will have no ill-effect on the quality of the resulting picture, as the exposure is not carried far enough for the high-lights to become affected, and it is these portions which always suffer most when there is any tendency to granularity caused by an excess of pigment.

"When using a platinum print as a base, the previous remarks in connection with the sizing of the paper must not be lost sight of, and, compared with the tub-sized paper mentioned, the paper support of a platinum print will be found very soft. Unless a preliminary sizing be given, it will be necessary to sensitize the paper by immersion.

"There is yet one other way of applying the sensitizer, which is very convenient if the paper is to be printed almost at once; but unless this be done, insolubility will take place very soon. It consists in mixing a small quantity of ammonium bichromate with the pigment. It will be found advisable to make up the bichromate in a strong solution—say, about ten per cent—and just before using dilute it with three parts of water, and in this the pigment must be dissolved and applied in the usual way.

"Theoretically, the negatives for this process, when combined with a platinum print, should be kept thin, as in the case of gum and platinum, so that a somewhat flat platinum image is formed, with full gradation in the lighter portions, the shadows being afterwards brought up to proper density by the superimposition of pigment. However, this is not so important in practice, owing to the much greater latitude obtainable with a gelatine as a colloid. When mixing two colors, such as lampblack and brown—which is usually an earth color—care must be taken that they are thoroughly incorporated and stirred frequently while in use, otherwise there will be great danger of the brown, which is naturally heavy, sinking to the bottom of the vessel, while the light and feathery lampblack remains in suspension, and consequently no two pieces of paper are coated of exactly the same color.

"If necessary, a great deal of retouching can be done upon the print, and for this purpose it will be well to keep a small piece of the pigmented paper before it is sensitized. This will provide a supply of pigment exactly the same color as the print, and, carefully done, a considerable amount of painting can be done without being visible, as it matches exactly."

BRUSH DEVELOPMENT OF BROMIDE ENLARGEMENTS

The following details of the working method employed by P. F. Visick are practical. Writing in *Amateur Photography*, he says:

This method of dealing with large bromide prints will not only appeal to many workers

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who may not possess the necessary large dishes, but will also be of use to those who wish the production of their enlargements in bromide to be under complete control, so that any portion may be strengthened, as the subject may demand.

The work is done upon a board large enough to accommodate the biggest enlargement anticipated. It must be perfectly smooth surfaced, and should be kept scrupulously clean at every stage. Dirt, in the nature of grit, would prove fatal. One side may be marked for developing only, and the other side for fixing. Both sides should be well scrubbed after use. The developing board may also be used as the base on which to pin the bromide paper when making the exposure; this is frequently necessary if the print is a big one. Care should, of course, be taken to fix the board properly, so that it is truly vertical and horizontal when focusing the picture.

Procure half a dozen jam-jars or similar vessels, and into them place sufficient of the following solutions:

1. Water.
2. Developer.
3. Water.
4. Hypo.
5. Water.
6. Hypo eliminator.

No doubt any good developer will answer, but I prefer the "Imperial Single-Solution Metol-Hydroquinone," with two additional parts of water added, thus:

Metol	50 grains
Sodium sulphite	500 grains
Sodium carbonate	500 grains
Hydroquinone	40 grains
Potassium bromide	25 grains
Water	20 ounces

To one part add two parts of water.

This developer can be used over again, and gives good black and white tones. I always use Wellington and Ward's bromide paper, as it allows so much latitude in treatment.

For hypo eliminator I use Marion's Hypoho. This is an excellent preparation, that does all that is claimed for it. The user should realize its high state of concentration, and follow the instructions exactly.

Before setting to work I must admit my belief in a plain hypo bath, which, in my hands, has never produced a stain on gaslight or bromide paper. According to some workers, it thereby performs an impossible task! Where a paper and developer that tend towards extreme rapidity in working are used, it may be necessary to use an acid bath to arrest development; but, given a good paper and a good, clean-working developer, there is nothing to fear even with the brush method, let alone the ordinary method of employing dishes! A bowl of water will be required for the final washing, and seven brushes form the complete outfit.

While fewer brushes could be used, it is best to get seven, as there will then be one for each stage. Imitation camel-hair mops are the most suitable, and they can be got from ten to twenty-five cents each, according to size; and seven of them, costing, say, less than a dollar, come out at considerably less than one large dish, be it metal, glass, or porcelain. Besides, with a supply of good brushes, one may go in for sizes that would require a set of miniature swimming baths and huge quantities of solution.

Having made the exposure, get as much yellow light as will be safe, and well wet the board with water from jar No. 1. Lay the paper face upwards upon it, and wet the coated side also. The developer is then applied, working the brush, until quite limp, down and across, when it will be seen that the enlargement develops quite evenly, owing to the dilute state of the developer. The developer should be applied as quickly as possible in the early stage, but there is no need to hurry the other processes. When the enlargement is fully developed the action will cease if the exposure has been timed correctly. It is then rinsed with the water in jar No. 3.

If desirable, the surface of the board can be covered with white oil cloth in the same manner as suggested by Mr. Mortimer in his method of working, or a large sheet of glass can also be used. The latter is, however, liable to breakage, but is otherwise ideal for the process, as it can be kept clean so easily. It might be possible for an enterprising maker to put a large pulp or *papier-mache* slab on the market for this purpose. If this could be obtained with a ridge or channel at the lower end to catch any overflow of solution, there should be a big demand for such an article.

It is generally best to work this process with the developing board inclined at an angle, and with the lower end in the develop-

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ing sink or with one corner in a dish, so that any liquid that runs down will not flow on to the floor or one's clothes.

The print has now to be fixed in the same manner, brushing it at frequent intervals on both sides for about ten minutes, using a solution of hypo, 3 oz.; water, 10 oz. At all stages except development, there is no need to keep the brushes on the move the whole time, providing they be well charged.

Having fixed the print, it is rinsed with the water in jar No. 5, and then requires two minutes' treatment with the eliminator, turning it during the operation. The eliminator should be liberally used, and all that remains is to wash the print with plenty of plain water from the bowl or bucket for ten minutes. The water should be changed twice. Five minutes is sufficient for ordinary work, but larger sizes, when treated with a brush, demand longer.

In conclusion, I may add that the work can be done in less time than it takes to explain it, and that the secret of success lies in having the board free from dirt of any kind, the brushes well charged, the exposure correct, and the developer dilute.

It is also obvious that the method opens up vast possibilities in the way of local development. The progress of development is kept well under control by the dilute condition of the developer, and the gradual growth of the image can be watched at ease. Any part can be retarded by mopping it with plain water, or accelerated by adding fresh developer continuously to one spot. The production of a large print in this manner has a fascination that must be experienced to be fully appreciated.

I have employed a similar method for large work. Speaking for myself, I prefer acid amidol as a developer on account of its very slow action. Also, I think one of the great advantages of brush development is that fresh developer can be used for each print, thus preserving the purity of tint which is always affected by allowing the used developer to come in contact with a print. I wash my brush between each development. The board I use is coated with paraffin, applied by heating it over the oven and letting it absorb as much paraffin as it will take up. Such a board is most difficult to contaminate with chemicals, requires no scrubbing; mere rinsing with water making it clean. If it gets roughed up, a warming over the stove puts matters right again. I keep separate boards for development and fixing. With acid amidol there is no difficulty in maintaining equality of development, even if it be applied full strength. For fixing I use hypo containing a little sodium bisulphite.

A POSE By W. T. HOHENSHELL

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

A METHOD OF DEVELOPING

Another visitor described a method of developing that has proved very effective in his hands. As it is a little unusual, and particularly interesting in connection with the uniform good quality of his negatives of a variety of subjects, as shown in the prints he had with him, I will describe the procedure as nearly as I can. The formula used is made up in two solutions:

A: Sulphite of soda..... 2 ounces
Metol .....48 grains
Hydroquinone .....48 grains
Water .....20 ounces
B: Carbonate of potash... 2 ounces
Water .....20 ounces

The plate is placed in the A solution for thirty seconds, next into the B solution for a like length of time, and then into the hypo fixing bath. The length of time the plate is left in the A solution, after the thirty seconds required for it to become thoroughly saturated, does not seem to matter; but an increased length of immersion in the B solution makes considerable difference. This last time of immersion can be cut down or increased, according to the quality of negatives wanted. Used as recommended, the negatives will all be of good printing quality, be they over, under, or correctly exposed, although, of course, of different densities. Our friend claims that the method does for plates what the Kodak tank does for roll film, except that it does it in about one-twentieth of the time. As the work can be carried out in complete darkness, it should appeal quite strongly to users of color sensitive plates. Any developer that requires an alkali can be used, but he has found that a plain pyro developer requires about twice as much pyro as the combined amount of metol and hydroquinone called for in the above formula. The formula is one that was published in the English magazines some two years ago, as originating with Herr Paul Joanovich of Budapest. It will be observed that the plan has much in common with another method in which the blocking up of high-lights before all obtainable detail is secured, is prevented by allowing only a thin film of developing solution to act upon the plate, placed perfectly level therein, and the tray not rocked. In the above method, only a given amount of the developing agent proper, the amount absorbed by the film during the immersion in the A solution, is available. This amount can be so regulated that while there is always sufficient to bring out any detail in the shadow portions, there is insufficient to permit of blocking up the high-lights. As a final recommendation, the method is economy itself, as both solutions can be used over and over again, discoloration being very slow owing to the fact that alkali does not come in contact with the developer proper.

RAPID SENSITIZING OF CARBON TISSUE

A correspondent asks that we again give the directions for the quick sensitizing of carbon tissue, as given in this department over three years ago. He also asks if it can be recommended, and if it has been adopted by workers in this country. As to the last, we can assure him that it has been found eminently practical by local workers, many claiming that the prints so made are much superior in quality to those produced by sensitizing in the ordinary manner. Briefly, the directions are as follows, quoting from A. H. Hall's directions in *Photography* some few years ago: "A ten per cent solution of either potassium or ammonium bichromate is made up, using hot water, and when cold the solution is filtered. To each ounce of it an ounce and a half of pure acetone is added. In the case of potassium bichromate a quantity of crystals will be thrown down, but this will make no difference. A piece of tissue is then taken and pinned by its four corners to a stout piece of cardboard, a little of the solution is poured into the middle of the tissue, and is spread quickly and evenly over the whole surface with a broad camel-hair brush. The brushing is continued, backwards and forwards, and up and down, until there is a

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tendency for the brush to stick. The tissue is then put into a cupboard away from the light, and it will be found dry and fit for printing in about fifteen minutes. Besides ensuring the complete solubility of the tissue, the method has several other advantages. No preparations are necessary until it is certain that a suitable day has been obtained for printing. A dozen pieces can be sensitized in a very short time and at a very small cost."

REMOVING SILVER STAINS

We had thought complaints as to silver stains were a thing of the past, but along comes a reader who has recently been proofing his negatives on printing-out paper, and stained some of them very badly through not allowing the negatives to become fully dry. To remove the stains, immerse the negatives in a solution composed of:

Iodine .....20 grains
Alcohol ..... 4 ounces

When the stains appear yellow by reflected light, transfer the negatives, for a few minutes, to a ten per cent. solution of hypo and then wash thoroughly. If the stains have not been entirely removed, repeat the process. Do not allow the negative to remain in the first solution too long or the image itself will be reduced.

RETOUCHING BROMIDES FOR OZOBROME

T. H. Grunall, an English worker, gave, some years ago, a formula for a retouching medium that would redevelop with the bromide printed, and one that would also work successfully when a number of transfers were to be made. The following is what our correspondent wants: Put ten grains of Nelson's photographic gelatine in a small, wide mouthed bottle, add half an ounce of water, allow the gelatine to swell, and then melt with gentle heat. Next add, while the gelatine solution is still warm, about two grains each of chloral hydrate, silver nitrate, and metol. This becomes a black jelly when cold, and must be liquified for use by standing the bottle in a cup of warm water. It will be dense enough for spotting the deepest shadows, and for lighter and broader portions it can be diluted with warm water. This last is best done on a piece of opal glass, warmed over the steam from the cup of hot water. Test the diluted mixture on a piece of paper before applying where wanted, because it immediately sets when put on the cold print, and any attempt to work it about will damage the gelatine film. An ozobrome print, by either of the two methods, will give about the same depth as the retouching.

REMOVING PYRO STAINS FROM THE HANDS

One worker that we know, a dentist who finds his hands must be kept free from stains despite his preference for pyro, adopts the following method which he claims is perfectly effectual. Take a strong solution of permanganate of potash and rub it well into the stained portion of the hands, rubbing until the parts are thoroughly blackened. Then rinse for a few moments under a stream of water, and immerse in a saturated solution of oxalic acid. If the latter is made warm it will act all the quicker. The first chemical is perfectly harmless and the acid quite a mild one. At the same time, the latter will prove painful in case the skin is ruptured by a cut or scratch; and, with those having a tender skin, frequent use of the acid might prove harmful. Used with care and the hands thoroughly washed afterward, there need be no fear as to results, judging from the experience of the worker quoted, who has used it regularly with the most gratifying success.

WASHING NEGATIVES

It is really surprising how thoroughly the hypo may be removed from negatives by simply soaking. A gentleman of our acquaintance is compelled, where much of his photographic work is done, to economize in his use of water, and this is the way he goes about washing his negatives. He places them in a rack, vertically, and then places the rack in a bucket of water; a leg at each corner keeping the plates a little over an inch from the bottom of the bucket. He has found that a couple of hours' soaking will so completely remove the hypo that the negatives may be subjected to any one of several methods of intensification without danger of spots, such as are due to insufficient washing, making their appearance. However, he makes a practice of changing the water at the end of the first hour, if possible, the washing being, of course, made more thorough thereby.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

STATE SECRETARIES

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

California—W. E. Thomson, 3540 School St., Fruitvale, Oakland.

Indiana—R. A. Underwood, 912 E. 15th St., Indianapolis.

Kansas—H. H. Gill, Hays City.

Mississippi—Joe C. Montgomery, R. F. D. No. 1, Box 36, Edwards.

Missouri—J. F. Peters, 6220 Berthold Ave., St. Louis.

New York—Louis R. Murray, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

Wisconsin—F. W. Freitag, 500 Monument Square, Racine.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Alaska—P. S. Hunt, Valdez.

California—Sigismund Blumann, 3159 Davis St., Fruitvale, Cal.

Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

Connecticut—George E. Moulthrope, Bristol.

Florida—Capt. E. S. Coutant, U. S. Life-Saving Service, Oak Hill.

Illinois—George A. Price, R. F. D. No. 1, Summit.

Indiana—H. E. Bishop, 1704 College Ave., Indianapolis.

Iowa—C. E. Moore, Eddyville.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th St., Baltimore.

Massachusetts—John Mardon, 161 Summer St., Boston.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota—Leonard A. Williams, St. Cloud.

Mississippi—Emory W. Ross, Institute Rural Station, Edwards.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 266 Ford St., Ogdensburg.

New Jersey—Burton H. Allbee, 103 Union St., Hackensack.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon—Leonard S. Hopfield, Box 622, McMinnville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—Frank Reeves, Roby.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

2683—B. T. Johnson, R. F. D. No. 1, Box 5, Sharon, N. Dak.
Post cards. Class 1.

2684—H. M. Menner, 427 Calfax Ave., Scranton, Pa.
4x5 and 3¼x5½, developing paper, of general views; for general subjects that may be of interest to me. Class 1.

2685—John H. Rudolph, Photographers Place, Diggins, Mo.
Class 2.

2686—Nelson A. Hallaner, 1740 Jackson St., N. E. Washington, D. C.
Class 2.

2687—Chas. H. Spaugh, Laidlow, Ore.
Class 2.

2688—Chas. C. Ferris, Box 693, Syracuse, New York.
3¼x5½, developing paper, of landscapes, snap shots, and general views; for post cards and stereo views. Class 1.

2689—H. H. Walsh, Valdez, Alaska.
Class 3.

2690—Bartlett Johnston, Box 25, Collbran, Colo.
5x7 and 6½x8½, developing and printing-out papers, of photos of wild game and Rocky Mountain and lake scenery; for interesting views, game pictures, good foreign views especially desired. Class 1.

2691—Raymond W. Goodspeed, Chamberlain Road, Malden, Mass.
3¼x4¼ or 3¼x5½, developing papers, of animals, country life, views, etc.; for all kinds. Class 1.

2692—Henry Herdernan, 606 68th Ave., West Allis, Wis.
Stereos only, of life and genre studies; for the same. Class 1.

2693—A. H. McKee, 2740 Moyston St., Wheeling, W. Va.
4x5 and 3¼x5½, various papers, of landscapes and city views; for the same. Post cards only. Class 1.

2695—Geo. W. Young, Santa Paula, Cal.
4¼x5½, developing papers, of all sorts of outdoor views, mountains, etc.; for the same. Class 1.

2694—Parr Goodall, Box 54A, Hemet, Cal.
Class 2.

2696—Alfred O. Ellis, R. F. D. No. 20, Westfield, N. Y.
Class 2.

2697—Mrs. Lillian Smith, Toledo, Ore.
Class 3.

2698—Lemuel Barber, Box 495, Dysart, Iowa.
3¼x4¼, of landscapes, rivers and park scenery; for lakes, woods, historical or mountain scenery. Post cards only. Class 1.

2699—Fred P. Flake, 226 M. & J. Bldg., St. Louis, Mo.
Class 3.

2700—H. E. Mitchell, Goodland, Kans.
Class 2.

2701—W. M. Horsley, 1216 Chapala, Santa Barbara, Cal.
Class 2.

2702—F. O. Steger, 920 E. Eldorado St., Decatur, Ill. Class 2.

2703—Lewis F. Tuttle, Anthony, Kans.
3¼x5½, developing paper, of scenery, water scenes, views, and post cards; for scenery, views and post cards of interest. Class 1.

2704—O. D. Howlett, 56 Chestnut St., Wakefield, Mass.
5x7 and post cards, various papers, of nature prints and genre; for the same. Post cards only. Class 1.

2705—John B. Kennedy, Box 157, Belt, Mont.
4x5 and 5x7, developing paper, of general views, and scenery of all kinds; for views and beautiful scenery. Class 1.

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2706—William H. Davidson, 610 Peffer St., Harrisburg, Pa.
Class 2.

RENEWALS.

739—Wharton Schooler, R. F. D. No. 2, Eolia, Mo.
Post cards, of flood, cyclone, landscape, street scenes and farm views; for post cards of street scenes, farm views, marine and general subjects. Class 1.

937X—E. A. Woodard, R. F. D. No. 2, Box 33, Fairoaks, Cal.
Post cards only. Class 1.

1056—J. F. Ruggles, West Burke, Vt.
5x7 and 3¼x5½, printing-out paper, of landscapes, historical buildings and monuments; for the same on any paper. Unmounted prints only. Class 1.

1250—W. K. Crisp, Hampton, N. S., Canada.
Up to 8x10 and stereo, developing paper, of Nova Scotia scenery, also portraits and miscellaneous; for stereos of natural scenery and interesting subjects, also stereos or single prints of tropical scenery, uncivilized life, boys of foreign lands and good nude or semi-nude studies, wild animals and strange plants. Desire only unmounted prints unless otherwise agreed. Class 1.

1807X—C. J. Christenson, Thor, Iowa.
Post cards, of landscapes and general views; for anything of interest. Good work only. Class 1.

1811X—Mrs. J. A. Kilcoyne, 543 Nehalem Ave., Portland, Ore.
post cards. Class 1.

1840X—Thos. C. Barbour, Box 212 (was Box 111), Gonzales, Texas.
Post cards and 5x7, of river and general views; for landscape, marine and historical views. Class 1.

2082—Harry J. Davies, Perham, Minn.
Class 1.

2161—Leo MacDonough, 1422 Indiana Ave., Toledo, Ohio.
2½x4¼, developing paper and post cards, of outdoor views, landscapes, small groups and public buildings; for the same, also mountain scenery and historical scenes. Class 1.

2189—Harold Hende, Hendes Ferry, Westland, New Zealand.
Class 3.

2203X—W. D. Leonard, 519 W. Perkins St., Hartford City, Ind.
Post cards only. Class 1.

2232—J. L. Park, 7939 Susquehanna St., Pittsburg, Pa.
Stereos, printing-out and developing papers, of a wide range of city and country subjects. Stereos only. Class 1.

2246X—L. E. Millea, 357 Main St., Norwich, Conn.
Class 2.

2269X—Carl Farnsworth, Litchfield, Nebr.
4¼x6½, developing paper and post cards, of landscapes, snow scenes, animals, amusing children pictures, fast trains, lightning, Colorado mountain scenery, including views from the "Royal Gorge" and "Garden of the Gods," also pictorial, showing good detail; for prints or post cards of landscapes, mountain, marine and historical views, animals, child studies or anything of general interest. Foreign exchanges especially desired. I turn out good, careful work and wish that class of exchange only; all work sent and received on approval. Class 1.

2275X—Ethel L. Matlack, R. R. No. 2, Grand Junction, Colo.
Class 2.

2285—C. A. Holman, Dredge No. 83, Gatun, Canal Zone, Panama.
Class 2.

2301—Kenneth B. Norton, 898 Bryden Road. Columbus, Ohio.
3¼x5½ and smaller, of views, animals, etc.; for the same, also scenes in foreign countries. Class 1.

2315—E. O. Hoffman, North Liberty, Ind.
Class 3.

2319—Verdi Burtch, Branchport, N. Y.
Post cards, of birds, nests, eggs and nature studies; for the same. Class 1.

2335—Clyde Dunton, Mercer, Maine.
4x5, developing paper. Post cards only. Class 1.

2342—Chas. H. Spaugh, Laidlaw, Ore.
Class 2.

2351—Hugh A. Graham, 207 E. 8th St., Traverse City, Mich.
Class 2.

2353—Ed Bernier, St. Anne, Ill.
5x7 and 6½x8½, various papers, of lake, river and woodland views, also country life in general; for anything of interest in fair grade of work. Class 1.

2408—Vesta C. Haney, East Lansing, Mich.
Class 2.

2439—Perry A. Wilson, 227 Gates Ave., Elyria, Ohio.
Class 2.

2482—John W. Kimball, Jr., R. F. D. No. 1, Sharon, Vt.
4x5, 3¼x5½ and 5x7, developing paper, of rivers, lakes, brooks, mountains, landscapes, country scenes, etc.; for like pictures or anything of interest on developing paper with white margin. No printing-out paper or post cards wanted; only good work. Class 1.

2486—Arthur P. Barnes, Box 468, Duluth, Minn.
Class 2.

2499—Andrew Schoeppler, 407 Dubois St., Detroit, Mich.
Post cards only. Class 1.

2536—R. LeFevre, 93 Wenona St., Ocala, Fla.
4x5 and post cards, developing paper, of subjects peculiar to locality; for the same, also for out-of-the-ordinary views, such as mountain scenery, etc. Class 1.

2561—Stuart P. Walsh, Box 107, Lockport, Ill.
4x5 and post cards, of general landscape work, Chicago shipping and lake views; for country scenes, mountain and marine views. Post cards or prints; good work only. Class 1.

CHANGES OF ADDRESS.

1634—Chas. A. Koch, Carbondale, Colo.
(Was Marble, Colo.)

1831—Frank Dillon, Willits, Cal.
(Was Gardnerville, Nev.)

1847—R. S. Gallie, care Orton Hotel, Pine Bluff, Ark.
(Was Little Rock, Ark.)

1921—G. T. Simmons, Walcott, N. Dak.
(Was Sharon, N. Dak.)

2144—W. M. Horton, Tupelo, Okla.
(Was Alvord, Texas.)

2407—Chas. J. Noll, 819 La Fayette Ave., Racine, Wis.
(Was care Racine College.)

2428—James P. Hutchings, No. 4 Millikan Flats, Indianapolis, Ind.
(Was Ithaca, N. Y.)

2535—R. D. Count, 525 South Fifth St., Minneapolis, Minn.
(Was 1209 Hennepin Ave., same city.)

2677—Clarence J. Jacobson, 965 Logan, Louisville, Ky.
(Was 1007 E. Breckinredge, same city.)

2620X—Earl Whitford, 1033 E. 6th St., Fremont, Nebr.
(Was Shelton, Nebr.)

WITHDRAWALS.

2480—H. C. Jones, 309 W. Briggs St., Fairfield, Iowa.
On account of lack of time.

2563X—Nathaniel Mortonson, 806 High St., Marquette, Mich.
On account of lack of time. Will publish a new notice when ready to resume exchanging.

2567—Scott Trammell, Fort Seward, Alaska.
On account of lack of time. Will publish a new notice when ready to resume exchanging.

2589—James R. Heaton, Hood River, Ore.
On account of lack of time.

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OUR BOOK SHELVES

"LANTERN SLIDES AND HOW TO MAKE THEM"

There has just reached our desk a most informative and well-illustrated booklet bearing the above title. To describe it we can only say that it is a complete exposition of the subject from a most practical point of view; in fact, it is in keeping with other like productions put out by Burroughs, Wellcome & Company. There is really nothing more that can be said. The publishers advise us that a supply of these booklets have been sent to the New York office, and that copies will be supplied gratis upon request to readers of CAMERA CRAFT. Do not delay, but write at once, addressing: Burroughs, Wellcome & Company, 35-39 West Thirty-third Street, New York City, mentioning this notice in doing so.

"THE LENS PART OF PHOTOGRAPHY"

The above is the title of a surprisingly large twenty-five cents' worth of practical information concerning photographic lenses, their properties, functions, and use. It is written by R. D. Gray, a gentleman whose practical and technical knowledge of photographic optics qualifies him to speak authoritatively. The book is well illustrated, both with the necessary diagrams to supplement the text and examples of photographic work of different kinds. Some idea of the contents may be gathered from a few of the chapter headings, amongst which are: Testing Lenses, Table of View Angles, Copying, Shutter Efficiency, and Photographing Tall Buildings. Copies can be obtained, postpaid, upon receipt of twenty-five cents, from Gray, Lloyd & Company, Ridgewood, New Jersey.

OUR HOLLAND CONTEMPORARY, "LUX"

A recent announcement from the office of *Lux*, our sprightly and instructive Holland contemporary, advises that it has purchased the seventeen-year-old *Photographic Weekly*, edited by J. J. M. M. van den Bergh, and, beginning January first, the new title is: *Lux, in Which is Incorporated The Illustrated Photographic Weekly.* This amalgamation, Mr. Schouten advises, gives *Lux* all the photographic readers in Holland and the Indies, amateurs as well as professionals. Although printed in Dutch, *Lux* is one of the most welcome of our exchanges, its illustrations being of the highest order, and its articles instructive to a degree. An effective reproduction of a natural color photograph that appeared in its pages during the past year being one of the best it has ever been our pleasure to see. We wish the new publication all success, and would advise those of our readers who can read Dutch to send for a copy. The address is 185 Van Breestraat, Amsterdam, Holland.

"AGFA BOOK OF PHOTOGRAPHY BY FLASHLIGHT"

A seventy-five page book, containing some fifteen reproductions of flashlight photographs, and a like number of interesting and instructive chapters on flashlight work, makes up the new book with the above title. It has been compiled by the genial George L. Barrows, a gentleman of no mean attainments as an amateur photographer, and a gentleman known to photographers and the photographic trade from coast to coast. All you have to do is to send a label from a package of Agfa Blitzlicht, the non-explosive flash powder, and ten cents for postage, and a copy of the book reaches you by return mail. Address, Berlin Aniline Works, 213-215 Water Street, New York.

NEW ROTOGRAPH DISTRIBUTORS

The Rotograph Photo Paper Company, 125 South Second Street, Philadelphia, has succeeded to the photographic paper business of the Rotograph Company of New York. The new agents will act as sole distributors of Rotograph and Rotox papers for the United States and Canada, and a complete assortment, in both rolls and cut sizes, will be constantly carried in stock.

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CLUB NEWS AND NOTES

Club Secretaries and others will oblige by sending us reports for this Department.

TORONTO CAMERA CLUB

You are invited to submit prints for the Eighth Salon and Twentieth Annual Exhibition of the Toronto Camera Club, to be held at No. 2 Gould Street, Toronto, Canada, from March twenty-seventh to April first, inclusive, 1911.

Abridged, the rules are as follows: No awards are offered and no charge will be made to exhibitors. Each picture must be mounted but not framed. Each exhibitor must place a *nom de plume,* a title, and a number on the back of each mount, sending at the same time, in a separate envelope his name and address with *nom de plume,* so that his prints may be identified by the Secretary-Treasurer. Any number of prints may be submitted but only such as in the opinion of the jury of selection show distinct artistic merit will be selected. Pictures must be delivered, charges prepaid, to the Secretary, Toronto Camera Club, No. 2 Gould Street, Toronto, Ont., and must reach club rooms not later than Wednesday, March 15, 1911. All exhibits from points outside of Canada must be sent by post. Exhibits will be repacked and returned to exhibitors as soon as practicable after the close of the exhibition.

HUGH NEILSON,
Secretary-Treasurer.

CHICAGO CAMERA CLUB

The Chicago Camera Club held its annual print sale on December eighth, members contributing prints to be sold for the benefit of the Club, in the way of new fixtures, etc. The sale was in charge of one of the members, who is a "born" auctioneer and wit, and was very successful, both as to proceeds and quality of prints. On December fifteenth, Howard R. Jackson, Hospital Steward U. S. N., one of the members of the Club, gave an illustrated lecture on, Life in the United States Navy, speaking from personal knowledge gained by many years' service. December twenty-second, Rev. Dr. Bartlett lectured on, The Passion Play, illustrating his talk with slides of his own making. His lecture was of exceptional interest, and the slides far better than those usually shown of this subject. The Club is particularly fortunate in having members who have had the opportunity of seeing and the ability to see understandingly as well.

LOS ANGELES CAMERA CLUB

On Wednesday evening, December 21st, the last meeting night of the Club before Christmas, the Los Angeles Camera Club presented President R. S. Crandall with a beautiful gold watch and chain. The outside of the case was engraved on one side with a monogram, "R. S. C.," and on the other, "Christmas, 1910," and on the inside case was engraved, "To our President, R. S. Crandall, L. A. Camera Club." Vice-President H. S. McClung made the presentation speech, expressing the pleasure of the members in being able to show their appreciation of the good work done for the Club by Mr. Crandall.

A handsome fountain pen, with gold band on which his monogram was engraved, was also presented to Secretary T. K. Adlard, Mr. McClung making the presentation in this case also. Both these officers were taken completely by surprise; both, however, thanked the members for their kindness and pledged themselves to even greater effort for the Club's welfare in the future.

CAPITAL CAMERA CLUB

The twentieth annual exhibition of Pictorial Photographs of the Capital Camera Club, 1010 F Street, N. W., Washington, D. C., will be held in the Hemicycle Hall of the Corcoran Gallery of Art during the month of May, 1911 (date to be announced later). This exhibition commemorates twenty years of continued successful exhibitions, and the committee in charge are striving to make it the most successful of any yet held. The Club has a reputation for good work produced by its members, and its exhibitions have always been most interesting and indicative of the energy and enthusiasm of the members.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

THE COOKE-TELLAR POPULAR

The popularity of the Cooke-Tellar lens, we are pleased to learn, is such that the demand is likely to tax the supply, for a time at least. A new model is now being supplied, one that is adapted to the Graflex type of cameras, being made as compact as it is possible to make such an instrument. With this new lens, one is enabled to use a focal length of nearly fourteen inches, and a high speed lens at that, on a No. 3A Graflex; or, with a camera having a bellows extension of thirteen inches. One can use a fast lens having a focal length of twenty-two inches. With the advent of this new lens, the Cooke-Tellar, telephoto snapshot work has been made a possibility easy of realization. A line addressed to the Taylor-Hobson Company whose advertisement appears elsewhere, will bring interesting information concerning this new lens.

HAVING A SYSTEM

The man who achieves success is the man with a system. The man who gets full value either in his work or his play, goes about things in a systema ic manner. The successful professional photographer is the systematic one; the amateur who achieves success is a systematic worker. Nothing is accomplished by groping along in a hit-or-miss fashion—life is too short. Yes, life is entirely too short; even did the patience of the average individual, and his good judgment, permit a course so wasteful of time and energy. There is a system in photography; perhaps not the final word, but the final word to date; and that system is embodied in "The Complete Self-Instructing Library of Practical Photography." Take the instructors and experts from the oldest correspondence teaching photographic school in this country; give them, in addition to their qualifications for their important positions, the experience they have gathered from these years of teaching by correspondence, and it seems quite logical that they would produce a system, embodied in this set of books, that should remove all necessity of experimenting, aimlessly attempting, or unprofitably striving, on your part. Every suggested improvement, every guarded secret method, every trick of the expert, has been tried out by these men, and tried out most thoroughly. They are all

incorporated in the system; and, what is more, so placed before the reader that he at once grasps the whole process, because it is placed before him by experienced teachers. We would advise our readers to write at once and get the beautifully illustrated catalog, a catalog telling how you can pay for the new, "Popular Edition" of ten volumes, as the books pay for themselves. Address, The American Photographic Text Book Company, 350 Adams Avenue, Scranton, Pennsylvania.

THE BISSELL COLLEGES

The Committee on Technical Schools of the National Employing Photo-Engravers' Association, paid a visit to the Bissell College of Photo-Engraving last month, thoroughly inspecting the different departments

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and the method of instruction; doing this in behalf of their Association. They expressed themselves as very much pleased with the growth and progress of the college. A new department has recently been installed for the etching of steel engravings, and the college will, in the future, give full instruction in this important branch of the engraving art.

PRINTING BY MAGNESIUM RIBBON

The Olson Magnesium Photo Printer, for the use of professional and amateur photographers, opens up an entirely new method of photograph printing. This new printer combines absolute uniformity of exposure, simplicity of operation, and an extremely moderate selling price. The chief advantage in the use of this new model is the incorporation of an automatic device using magnesium ribbon for illumination. Of all the illuminating agents, magnesium ribbon is the surest, as it is not affected by the fluctuation of an electric current, as is the electric lamp, nor by the uncertainty of the Wellsbach lamps, due to uneven pressure of the gas mains. Neither does it have the objectionable features of the prolonged exposure incident to oil illumination.

The magnesium ribbon is fed automatically by means of a simple gauge attached to the printer. The exposure for a negative can be absolutely determined. When the length of exposure has once been determined by test strips of paper, and the gauge set, any number of prints can be made from the same negative with the absolute assurance that every print will receive exactly the same exposure. The ribbon is fed between a roller and a spring, and forced through a flat tube. The tube, in turn, is swung over a lighted alcohol lamp which ignites the ribbon. The ribbon burns to the end of the tube and goes out, and is then ready for the next exposure. This printer is equipped with a two-inch pipe and elbow, to carry off the smoke, if so desired; but for a moderate amount of work the smoke does not make that necessary. This new model printer is small and extremely compact, taking up very little room on the work bench. In operation it is so simple that it does not even require an experienced printer, and the results obtained through its use are such that the photographers generally will find it indispensable. In economy of operation it is not surpassed by any other printer. The small amount of magnesium ribbon consumed costs less than any other illuminating agent, and it would be used without the expense incident to connecting the printer with the electric currents or gas mains. The magnesium ribbon costs about two cents per one hundred prints. All exposures are absolutely automatic, thus doing away with the clock and counting systems. The manufacturers absolutely guarantee every claim made for this machine. Write them for all particulars, addressing, Olson Photo Machine Company, 308 Main Street, Plattsmouth, Nebraska.

A HELP IN FILM PHOTOGRAPHY

The Ansco Company are putting out a valuable handbook on Film Photography that contains a wealth of good instruction and information for users of photographic film. Send for a copy and you will thank us for having given you the tip. Their advertisements have mentioned it, but, seeing one that a visitor produced, one just received, we were reminded they were still obtainable and would urge our readers to write for a copy before the supply becomes exhausted. They also have a booklet on developing papers that you can ask for at the same time. Address, Ansco Company, Binghamton, New York.

TAKING THE COMPLETE COURSE

About the best recommendation the Illinois College of Photography can want is the large number of pupils who return later to complete courses interrupted from one cause and another. Some few start with only a limited time at their disposal; a few others feel that they will need only a partial course; but, learning the value of the instruction given, they return, if possible, for the complete course. Write and get one of the new catalogs; they are free. Address, The Bissell Colleges, Effingham, Illinois.

THE HAMILTON POST CARD CAMERA

A recent letter from Mr. Hamilton, of the Hamilton Camera Company, Waterloo, Iowa, advises that the amount of business done last year, and indicated for the coming season, is far ahead of their most sanguine expectations. The firm now has regular customers in over thirty States, besides having shipped no small amount of photographic goods to foreign countries. While the increased demand for the Hamilton Post Card Camera

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is one of the most gratifying features of this most satisfactory condition, all makes have been sold and a general line of supplies furnished. This is only in keeping with the contents of letters that we have had from many readers who are pleased customers of this enterprising firm.

A NEW FAST PRINTING PAPER

The new "Kruxo Fast" paper and post cards have an emulsion that prints five times faster than the regular Kruxo grades and yet retains all the brilliancy and softness of the slower grades of paper. Made in regular weight, extra heavy, and in all surfaces. This paper has the quality of a chloride paper with the speed of a bromide paper. It is excellent for enlarging. While it is not so fast as a bromide paper, it gives a much more beautiful print. The manufacturers request all photographers to send for free sample packages. The little booklet, giving many useful suggestions including the sepia-tone-in-first-development, may be had for the asking. Address, Kilborn Photo Paper Company, Cedar Rapids, Iowa.

WILLIAM WOLFF REPORTS

Mr. Marcell, of the new Marcell Studio, in Bakersfield, was in the city the latter part of December, buying accessories for his large, new studio there. With him was his bride, the wedding having taken place December twenty-eighth.

Mr. D. Goodpasture, who recently sold his studio in Bakersfield, stopped in the city on his way to Medford, Oregon, where he was going to spend the holidays with his people. He expects to return to Bakersfield and locate in a new studio.

W. S. Valentine, the leading photographer of Redding, California, was in town early in January. He reports business excellent at both his Redding and Stockton studios.

A new studio, that of Jarvis & Becht, has just been opened in the Eilers Building, 973 Market Street, this city. They have done some excellent flashlight work in the largest halls in the city, and portrait work in the studio is reported as excellent.

LOS ANGELES Y. M. C. A. CAMERA CLUB

The Los Angeles Y. M. C. A. Camera Club would like you to give notice of its organization. We wish to be informed in regard to all matters of interest to amateur photographers such as new supplies, exhibitions, prize contests, and the like. We are glad to have dealers use our rooms for demonstrations of their supplies before our members, and to receive collections of photographs for exhibition purposes.

H. Edgar Fry,
Associate Educational Director.

TO DO PICTORIAL WORK

Interest in pictorial photography is rapidly on the increase, beyond a doubt. A neat little brochure has just been issued from the Photo Crafts Shop, Racine, Wisconsin, entitled, "The Bodine Pictorial Lens," and we would advise all our readers to write at once for a copy. It contains, as the leading article, "The Story of the Bodine Pictorial Lens," and a most interesting story it really is. A copy will be sent, together with a small sample print made from a negative made with one of the lenses, to any of our readers who may apply. Address, H. Oliver Bodine, Keeper of the Photo Crafts Shop, Racine, Wisconsin. You will thank us for the suggestion.

THOSE RHODENSTOCK LENSES

We are getting letters from time to time from our readers who have become interested in the Rhodenstock "Eurynar" lenses, but fear that their modest price is an indication that their quality is not of the highest. This is not the case. The Rhodenstock factory is one of, if not the largest, optical factories in Germany, and the reputation of their lenses at home and in other countries is of the very best. The agents in this country are only too glad to give intended buyers every opportunity of satisfying themselves of the high quality of these lenses. Send for a catalogue and compare the speeds and prices with those of other high-class lenses. Address, James Frank & Son, Broad Street, Augusta, Georgia.

THAT TEN-CENT CATALOGUE

Not all catalogues cost ten cents, but they are not all worth that amount. If you will send ten cents for the one gotten out by George Murphy, Incorporated, Fifty-nine East Ninth Street, New York, you will agree that it is well worth the price. It is practically a dictionary of photographic supplies. If we had time we would count the illustrations and tell you how many there are. But get one and count them for yourself.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. Those of positions wanted inserted free. No business advertisements will be accepted.

FOR SALE the leading studio in a progressive western city of 12,000 population. Studio new and up to date; reception room furnished in solid oak, mission finish; operating room 40 feet square, north light and new Aristo lamp, 8x10 portrait outfit, 8x10 view outfit and 5x7 view outfit. All rooms of studio steam heated. Rent $30.00 per month. Studio enjoys the confidence and patronage of the leading people in the city. An A1 business proposition for a good workman. Price $1500.00. Refer by permission to Fayette J. Clute, Editor of "Camera Craft". Address W. G. Emery, Vancouver, Wash.

FOR SALE San Francisco studio, good location fully equipped and doing a good business. Must sacrifice. Good reason for selling. Address S. L., care "Camera Craft," San Francisco, Cal.

POSITION WANTED by young man, first-class negative retoucher, 12 years' experience in Europe and the States. Want permanent position. For samples of work and full information address Hansen, Box 541, Pocatello, Idaho.

PARTNER WANTED Well known, successful, conservative photographer with good patronage, high prices, fine studio, etc., would take as partner young man that understands the business thoroughly and one that can make first-class work. None other need apply. References exchanged. $4,000.00 required. Address Conservative, care George Murphy, Inc., 57 East Ninth St., New York.

FOR EXCHANGE One Eastman No. 4 S. F. Kodak, size 4x5, for a No. 4A Folding kodak, size 4¼x6½. Must look like new. H. A. Nerison, Westby, Wis.

WANTED To rent studio in good location. Send answers to Carl Anderson, 812 16½ St., Moline, Ill.

FOR SALE Fully equipped studio in city of 15,000. A good workman can make good. Price $1,200.00. Address H. P. S., care "Camera Craft," San Francisco, Cal.

FOR SALE One complete portrait outfit with Dallmeyer lens 2 B; cheap for cash or in trade for a Cirkut camera. Also 40 lantern slides from Norway. Write Otto Stromberg, Fletchers' Studio, Aberdeen, S. Dak.

WANTED 8x10, double swing, cabinet attachment, portrait camera, with or without lens. Must be cheap. J. F. Allen, South Main St., Lima, Ohio.

FOR SALE Studio in good locality, getting good prices. Will sell very reasonable. Ill health cause of selling. Fitted up to 8x10. For particulars address Box 63, Hayward, Cal.

FOR SALE Cottage Studio with branch, fitted to 8x10, view cameras, single slant north skylights, fine lens, good outfits. No competition. Box 66, Anthon, Iowa.

WANTED Present address of O. S. Burns, photographer. Woodard, Clarke & Co., Portland, Ore.

FOR SALE 5x7 Century camera, six plate holders, tripod, carrying case and tank. Cost $77.50; will sell for $45.00. W. W., 904 Denver Ave., Los Angeles, Cal.

WANTED Photographic salesman. We want a salesman acquainted with photographic goods and handling trade. Anyone intending to come East, we will be pleased to hear from now. Address Salesman, care George Murphy, Inc., 57 East Ninth St., New York.

POSITION WANTED By young lady as retoucher and receptionist. Have had experience in all branches. Steady and willing to work for reasonable wage at beginning. Box 842, Ellendale, N. Dak.

POSITION WANTED By experienced, commercial photographer. Have 8x10 and 5x7 outfits. Good dark-room man. Would take charge kodak finishing plant on salary or commission. Address O. D., care "Camera Craft," San Francisco, Cal.

FOR SALE 5x7 Korona V Turner Reich No. 2 series, 2 lens, 10-inch wide angle combination. Doublets 5½-inch, 7-inch and 7½-inch focus, all working with aperture of F 6:8. Single combinations 10-inch, 12-inch and 18-inch focus. Kollos shutter, antinous release. Eight 5x7 holders, six 4x5 kits, sole leather case, and Korona focusing glass. All in good condition. Price $87.00. C. A. Thomas, R. F. D. No. 1, Box 40, Lewis, Kans.

POSITION WANTED By first-class Japanese photographer as operator or printer in city or country. Has good reference. K. F., 1855 Laguna St., San Francisco, Cal.

FOR SALE Cirkut camera No. 10, fitted with Turner Reich convertible lens, series No. 2, and No. 4 Century shutter; also 4-foot printing frame. Practically new. Chas. Ganung, Waterbury, Conn.

FOR SALE Only studio in growing town of 2,000, furnished for light housekeeping. Will sell for $350.00 cash, as I have other interests in the north. Address Art Studio, Azusa, Cal.

PARTNER WANTED Young lady that is up-to-date in all branches of photography, to such I have a fine opportunity. Send samples of work and photo of self. For particulars address Box 46, Adams, N. Dak.

POSITION WANTED Lady photographer would like position as assistant in good, busy studio, or running branch studio in busy town. Good references; have position at present. Address A. B., care "Camera Craft," San Francisco, Cal.

WANTED Present address of Frank Hochberg, a German, speaking poor English; about 5 feet, 4 inches, black hair and moustache, who left Oakland December 17th, with an 8x10 camera and Morrison wide-angle lens belonging to me. C. W. Hinnenberg, 510 Forty-fifth St., Oakland, Cal.

FOR SALE Modern studio, account of sickness. A bargain for cash, or on terms; less than invoice. Best location in city of 50,000 in heart of California. Established patronage; long lease; every convenience; north light. Address E. E. Modern, care "Camera Craft," San Francisco, Cal.

POSITION WANTED Experienced all around photographer wants position. Address F. Klinkner, Sand Point, Idaho.

FOR SALE A fifteen-year establishment, ground floor studio in a town of one thousand population. No competition within 20 miles. North light, fine rooms, furnace heat, cistern and good well. For full particulars address H. W. Johnson, Akron, Iowa, Box No. 311.

PARTNER WANTED Must be first-class all around man. Must have about $300.00. For full particulars address Box 804, Thief River Falls, Minn.

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Vol. XVIII No. 3 MARCH, 1911 Price

Camera Craft

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CYKO IS THE CHOICE OF SCOTLAND'S FOREMOST PORTRAIT PHOTOGRAPHERS

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WHEN HE GETS HOME THIS IS WHAT HE WRITES:

"Please dispatch by next mail as I wish to get on with it at once:

1 Gross Cyko Paper Buff 10x8 in.
1 " " " " 14x11 "
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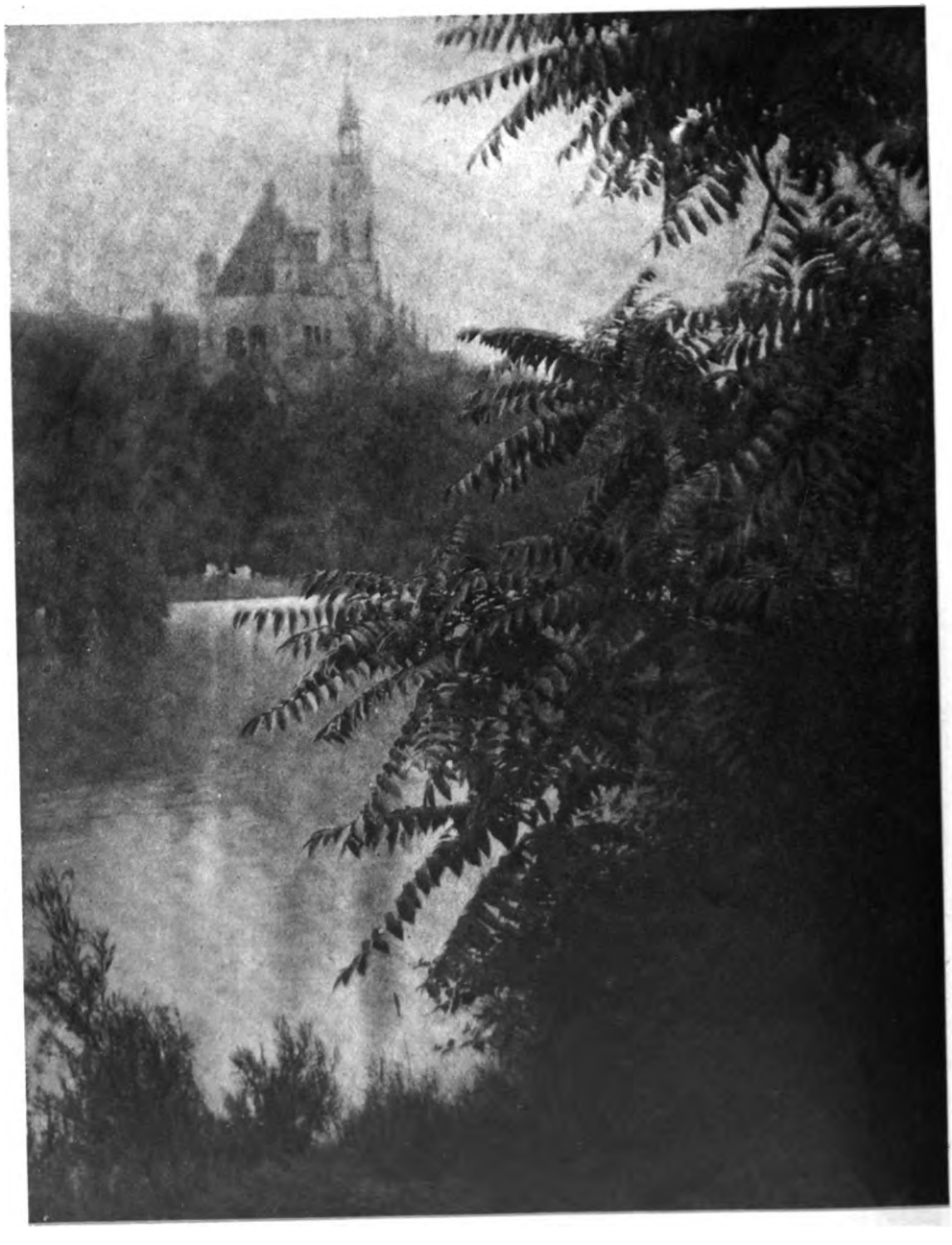

AN ECHO FROM THE RHINE
BY B. J. MORRIS
CHICAGO PHOTO FELLOWS

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

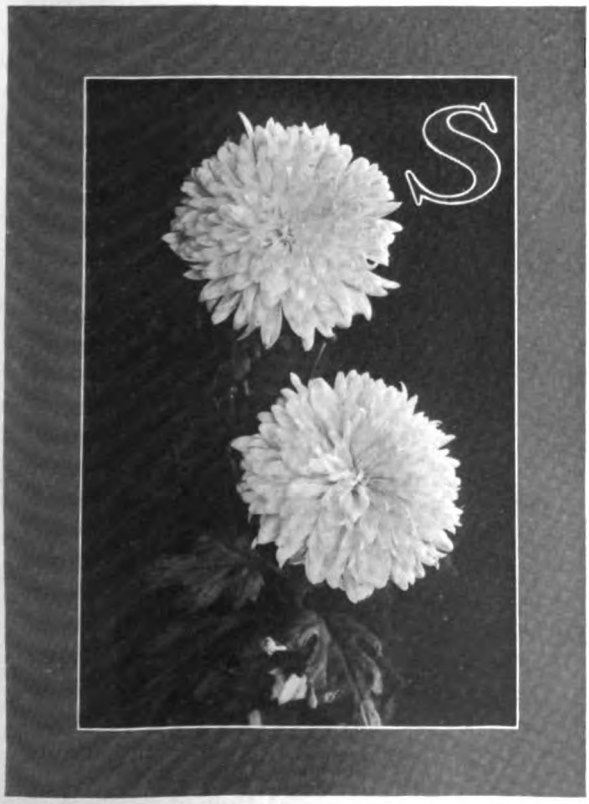
FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII MARCH, 1911 No. 3

A Few Notes On Flower Photography

By Roy J. Sawyer



CHRYSANTHEMUMS
(Cramer Medium Iso, U. S. 64, two minutes' exposure)

SUCCESSFUL results in flower photography can only be obtained by proper lighting. Flowers are not truthfully represented by masses of black and white in the print, masses devoid of detail; and the problem to be solved is the rendition in monochrome of the delicate gradation and rather elusive texture encountered in each individual specimen. Texture supplies, to some extent, the absence of color, and unless this texture is suggested in the resulting prints, the attempt to reproduce the original flowers in monochrome will not be convincing. Proper exposure and careful development are also important factors to be considered.

Experience has taught me that the best results are ob-

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tained indoors; as, when working outdoors the light is not under control, and the results have a tendency towards flatness. Some specimens, however, such as wild flowers and the like, when photographed in their original state, are, of course from necessity, taken out in the open. But good results can be obtained with specimens of this character by photographing them in the shade, subduing the light somewhat by placing the focusing cloth or other screen on the side where the light is the strongest and giving full exposure. "Apple Blossoms," herewith, was made in this manner. I have one window, with a north light, that I use for my indoor work; but other windows will answer if the light is controlled. The flowers should be placed about four feet from the window, and slightly to the rear, in order to give relief to the composition, and the shadow side should be lighted with a piece of white cardboard, care being taken not to place it too close but just near enough to reflect light sufficient to illuminate the shadows so that they will not appear opaque on the ground glass. I would not advise photographing flowers on a dull day, as the light usually fails to impart the necessary snap and brilliancy to them.

The support used should be rigid enough not to vibrate with every movement, as the least motion in the flowers will produce a blur in the resultant print. Gray is the best color of background for most specimens, and various shades, or depths of tone, can be obtained by placing the background at different angles to the light. A sheet of gray cardboard, about 20x24, is quite suitable for this purpose. Avoid shadows on the ground as they only serve to destroy the necessary effect of atmosphere and relief. Do not make the mistake of having too many flowers in the composition, as the results are apt to be a meaningless jumble, and one that is confusing to the eye. One or two flowers, when well placed within the picture space, are more pleasing than a dozen scattered, without method, over the print.

And do not think that a costly lens is necessary. I have found that a good rectilinear is preferable to an anastigmat, as the latter has a tendency to focus on one plane, requiring a small stop in order to render all portions of the flower in focus. The illustrations accompanying this article were all made with a rectilinear lens. A focal length of eight or nine inches, for a 5x7 plate, is preferable, as a lens of shorter focus is apt to give exaggerated perspective, especially when photographing flowers in large size. A long draw of bellows is essential, one of about sixteen inches usually meeting with all requirements. As to stops, I use a small one in order to bring all the planes of the flowers in focus. As the texture supplies to some degree the absence of color, the flowers should be rendered sharp, in order to suggest this texture. As flowers are usually viewed at close range, their detail is apparent to the eye, and this quality is necessary in the prints. To my mind, an out of focus flower study is an abomination.

Do not attempt to photograph dark red and white flowers in the same composition, as the results will be far from satisfactory on account of the prolonged exposure needed for the red which overexposes the white to an almost unprintable degree. A filter can well be dispensed with for most specimens, as it has a tendency to overcorrect the colors; and, in addition, the long exposure necessary, when using a filter, is apt to permit wilting in the

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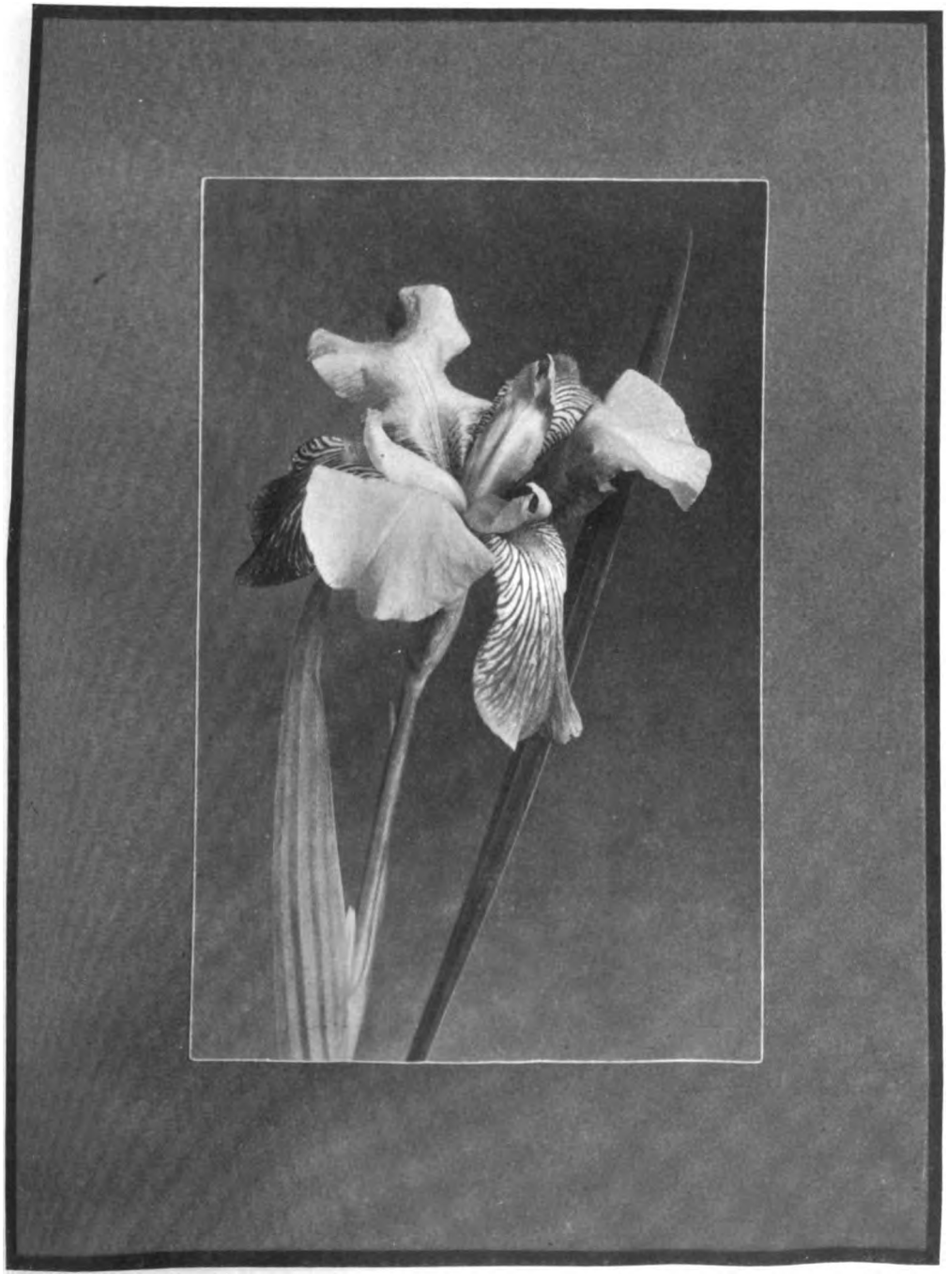

IRIS
By ROY J. SAWYER
(Cramer Medium Iso, U. S. 32,
one minute exposure)

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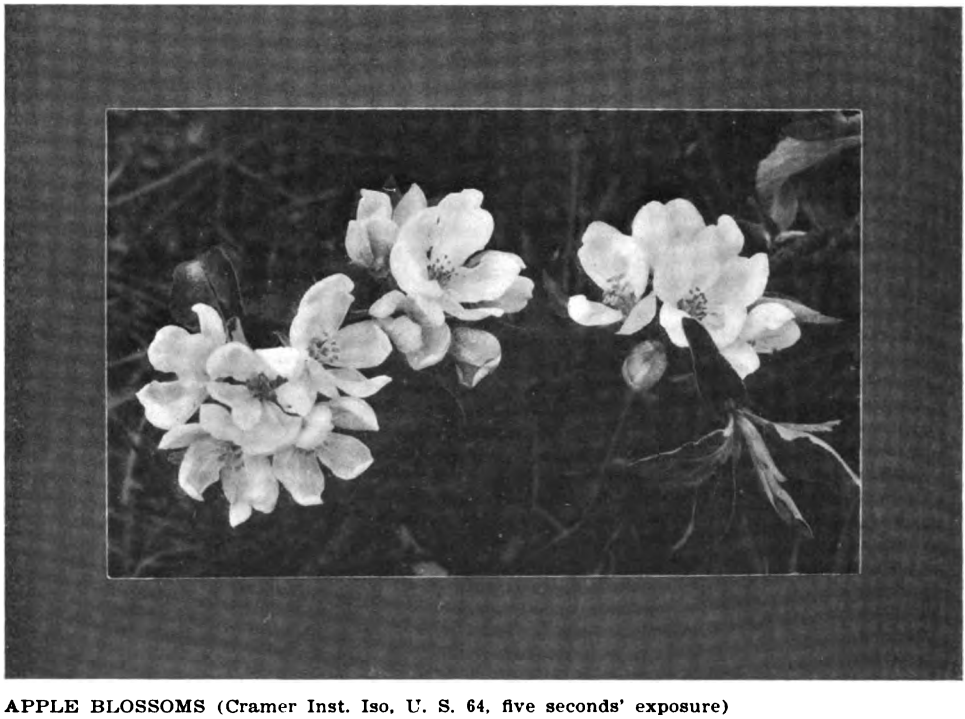
flowers being photographed. No rule can be laid down in regard to exposure, as much depends on the light, time of day, etc., but much overexposure is better than slight underexposure; as, with the former, the detail in the negative can be saved by the use of bromide, while, with underexposure, it will be practically impossible to obtain satisfactory detail in the shadow portions. I use isochromatic plates for all subjects, even white ones, and a color value plate should be the only one employed in this class of work.

In regard to developing, the plates should be placed in a solution weak in alkali, gradually increasing the amount as development proceeds, finally transferring them to a normal solution for a brief time in order to obtain



APPLE BLOSSOMS (Cramer Inst. Iso, U. S. 64, five seconds' exposure)

sufficient contrast. If, upon examination, the negative is a trifle thin, slight intensification will give it the desired printing density, using care not to overdo it, as it must be kept in mind that harshness must be at all times avoided in this class of work.

Fancy vases or receptacles should be avoided, as they only serve to draw attention from the flowers. In most cases it is not necessary to include the vase in the picture; most of mine show only the flowers. However, if the receptacle must be shown, let it be one of plain glass, or one without ornament of any kind. A plain glass tumbler will answer for some specimens, such as hyacinths and the like. If a vase is used it should be of unobtrusive design, as otherwise it simply detracts from the effectiveness of the picture. Usually, one of plain glass will answer; in most cases, however, the use of a vase can be dispensed with.

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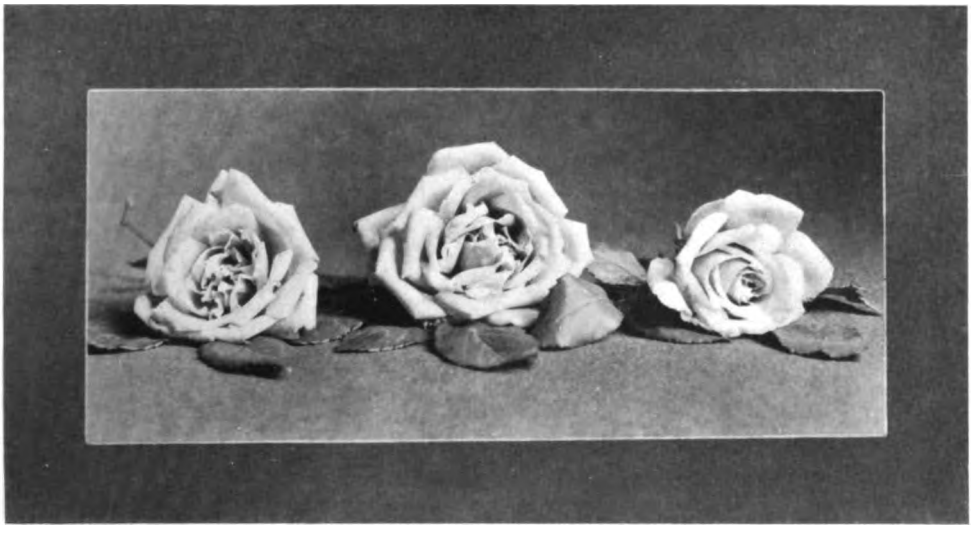
Care should be taken that the flowers are fresh, as they will not photograph well when in a wilted condition. Also, the specimens selected should be free from imperfections, such as broken petals or surface defects. Do not attempt to photograph flowers freshly cut as they have a tendency to



ROSES (Cramer Slow Iso, U. S. 64, four minutes' exposure)

droop; placing them in water for an hour or so revives them and stiffens the stems. When ready for work, the stems of the flowers should be placed in wet sand contained in the receptacle used. It will be found that the use of the wet sand permits one to easily arrange the flowers in any desired position, and they will, in addition, keep fresh much longer.

And last but not least, one should cultivate a liking for Nature's beautiful handiwork, and endeavor to reproduce each specimen in the manner most consistent with its character.

The Antiquity of Art

Art is the child of time and precedent. It inherits the ages; but unless the artist comes into his inheritance, he is helpless. At best, can he go but one little step beyond the fathers, add one little stone to the edifice; and, in order to accomplish even this much, he must know well the work of his predecessors. If by some dreadful catastrophe all the art of the world should suddenly be destroyed and all knowledge of it be blotted from the minds of the survivors, it would require ten thousand years for humanity to recover the lost ground. As an artist is dependent upon the past, it is evident that he must strive to see and to study all of the past art that he can find—to feed his mind constantly upon it.—BIRGE HARRISON.

When love and skill work together expect a masterpiece.—RUSKIN.

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Chicago Photo Fellows' Exhibition

By F. M. Tuckerman

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In September, 1909, six of Chicago's amateur photographers, all congenial friends, "tried and true," organized the little society that is the subject of this article.

Its founding was the result of a feeling on the part of all the men concerned, that, through lack of organized effort, of a definite goal to be reached, and of just yet kindly criticism of pictures from proofs to mounted and framed completeness, the individuals were working at a great disadvantage.

It was thought that a small body of friends with similar ideas on art and its expression by means of the camera, and capable of giving and taking intelligent criticism kindly, could, when working for a definite and desirable result at an agreed and equal rate of progress, accomplish much for themselves and for each other.

The possible membership of the new club was, therefore, fixed at ten, a few simple rules adopted to insure new members being congenial and possessed

POND LILIES — By GEORGE ALEXANDER

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A STREET IN KILLARNEY — By H. HOWARD HYDE

of satisfactory artistic ability and sufficient enthusiasm to move forward with the original members. It was also the tacit understanding that any member finding himself unable to "keep the pace" was to drop out, thus keeping the organization in good working condition and unhampered by any dead timber.

Meetings were to be held monthly, each member agreeing to produce a finished picture each quarter, proofs being submitted for criticism the first and second months. Prints accepted were to be given the Club's official label, and to be reserved for exhibition for the first time by the Photo Fellows. This program has been carried out faithfully, and as a result, the Chicago Photo Fellows, now seven in number, were able to place on exhibition in the Art Institute of Chicago, in December, 1910—a little over a year after its organization—twenty-eight pictures that attracted the attention of artists and the general public alike.

The collection possessed a variety of subject, composition and treatment that was very pleasing, many of the effects obtained exciting questions from visitors as to their being "really photographs."

Regardless of process, however, the results obtained showed an appreciation of tonal quality, of composition, of simplicity of treatment and harmony of mount and frame that was very gratifying.

While not being followers of impressionism, and printing obscure suggestions of pictures, the Photo Fellows have eliminated the hard and unnecessary detail so often seen even in the better class of modern photography, and

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MADELINE By B. J. MORRIS

have presented their subjects with force, precision and truth, yet with a complete subordination of "process" to "idea."

Some of the more admired pictures were "Market Day," by D. H. Brookins, a vigorously lighted street scene in the Ghetto, printed in brown ozobrome. Mr. Brookins' "Snow Storm," a cold bromide, was also a favorite because of its simple and delicate though bold handling.

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B. J. Morris' "Echo from the Rhine," a bromide full of atmosphere and feeling, was, perhaps, his best print, though his "Madeline," an ozobrome print of a smiling girl, was a close second. H. Howard Hyde's work was all in carbon, "The Steerage," a dark blue print, and "In the Alps," in Italian green, being the best of his four prints.

"The Sweeper," a grey bromide print by Paul Wierum, was a favorite, though his "Thorn Tree Hill," a striking red toned bromide of a long hill, topped with an old tree against a wind-swept sky, commanded instant attention. His "Noonday Rest," a beautiful street scene, was also exceptionally good. George Alexander used the same process to produce his "Brush Fire," which was only second in excellence to his "Pond Lilies," a beautiful dark green print of a pool with floating blossoms and shadows of the trees beyond.

C. W. Christiansen's work is well known to all readers of photographic magazines, but his four ozobromes had a beauty and quality that could never be reproduced by any halftone. "Autumn Evening," a study of a cornfield under an evening sky, was the best of the prints he showed.

F. M. Tuckerman's work consisted entirely of portraits in platinum and ozobrome.

The entire exhibit, which was shown in company with an exhibit of twenty-nine prints by the Buffalo Photo Pictorialists, was pronounced by those who know to have been the best exhibit of photographic work ever shown in Chicago, and certainly demonstrated the value of the small, carefully selected, hard-working club.

MARKET DAY IN THE GHETTO — By D. H. BROOKINS

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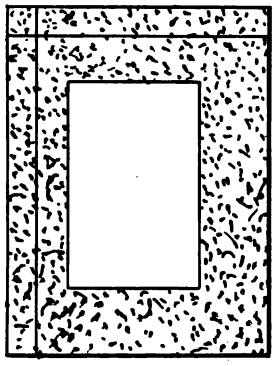
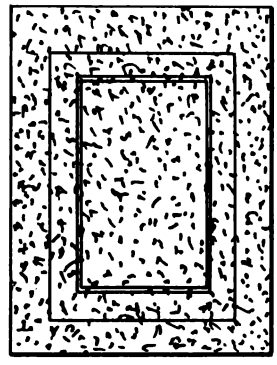
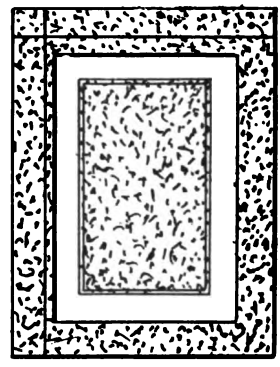
Cutting Masks For Border Printing

By Sigismund Blumann

Those readers who can successfully print borders, finding no difficulty in securing good register or in overcoming the other few difficulties, will kindly pass this article; and, if they be generously inclined, give me the benefit of their knowledge. To those to whom double printed borders are an unknown joy, or who have failed in their efforts to produce them, greeting; and an attempt to help towards results.







Without preliminaries, then, get a printing frame at least one size larger than the paper you intended to use. For 3¼x5½ use a 5x7 frame; for 5x7 paper use 6½x8½ frame, and so on. Next cut any fairly thin, stiff and tough card stock to the size of your frame. A good three-ply yellow or red bristol board is best, but manila tag or the so-called railroad ticket board of the same thickness will do nearly as well. Have a stiff bladed penknife, sharpened to a perfect edge, especially at the point; and, throughout your work, keep it sharp. A piece of sheet zinc, about four by ten, completes the equipment, except for a brass-edged ruler or steel straight-edge, and two sheets of clean glass the size of the frame being used.

To simplify matters, let us take 5x7 paper and proceed to print a 3x5 picture, with a narrow white border inside a wider dark one, around it. We are using a 6½ x 8½ frame and have our cards cut to that size. We take one of these cards and measure one and three-fourths inches from each edge and draw a line across each end and side, laying off a space in the center, 3 x 5 inches. This is cut out with the sharp knife, using the straight-edge and cutting on the sheet of zinc; which last enables a clean cut edge to be made without dulling the knife as would be the case if the cutting was done on a sheet of glass. Be careful to get the corners square and true. I find no trouble

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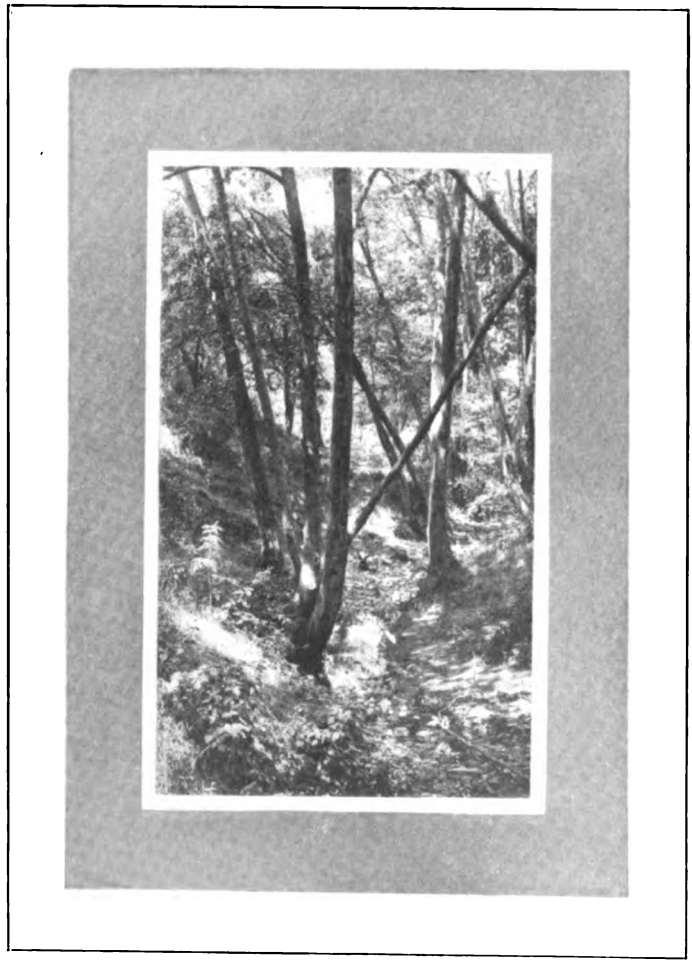
in doing this, but a friend seems to find it impossible to cut exactly to the corner and no further. If you have any trouble in that respect, simply cut right past the corner each time and then stick a bit of black paper over the cuts where they extend past and into the matt out of which you have just cut the center piece. Take this mask, with its 3 x 5 opening, and draw a line, parallel with, and one inch from the left hand side, and another the same distance from the top of the opening, doing it accurately. These lines give the register marks and complete the first mask, as shown in the first sketch herewith. See that the second card is of exactly the same size as this first one, and if not so, trim it accurately before proceeding. Then lay the mask just finished on top of this second one and, with a sharply pointed pencil, draw a line around and close against the edges of this opening. Take off the top mask and draw another line one-fourth inch outside the one made with the mask in position. Then parallel this second outline with a third, as far distant from the last as you wish your outer border to be wide, say three-eighths of an inch in this case. You will now have a card marked as in the second sketch. Take this, and with your sharp knife, straight-edge and zinc plate, cut out the center by following the last outline drawn. Take this center piece and trim down to the second outline drawn. Then take one of the clean glasses, and with some glue, used sparingly so that it will not squeeze out and soil the glass, fasten thereon the outer mask, and this trimmed down oblong exactly in their relative positions before being cut apart. This gives you a mask like the last of the three sketches, the shaded portions representing the cardboard part. The two lines shown, one at



HAUNT OF THE NYMPHS By SIGISMUND BLUMANN

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the left and one at the top, are register lines, drawn in pencil, one three-fourths of an inch from the outer edge.

If all has been accurately done, a print will show perfect results. If not, a slight alteration of the register lines may mend matters, or one can do the whole thing over, correcting any mistake that may have been made in the first attempt. The masks can be made, of course, so as to be available for the same sized print on several larger sizes of paper, but so doing means using a larger frame than is necessary for the smaller size, and requires a different set of register lines for each size of paper. I would advise a different set of masks for each size.

In printing, expose the paper for the border first, using the border mask only, getting the desired time by trying a small strip of paper. To insure perfect register in the two masks, it is well to get into the habit of joggling the mask down into say the lower left hand corner of the frame as you hold it with the back towards you, before putting the paper down on the register marks and putting in the back. The border being printed and the top of the sheet marked, take a frame containing the negative, previously stuck down to the other sheet of glass with bits of gummed paper, on it lay the first or print mask; on that the paper, and print the picture. There should be some judgment used in selecting the depth of tone of the border. Never make the border black by fully exposing, unless your subject is a *memento mori;* and, if the border is too light it will look like a stain on the white margin. Dark prints, and those from clear, crisp negatives, look best with a light border. Light prints or those from thin, soft negatives, may be given a semblance of body by a rather dark border surrounding them.

A sharply cut, clear, clean border enhances the beauty of most prints. The bolder the subject, irrespective of the size of the negative, the wider the border should be. A well printed border is, in itself, a thing of beauty; but, with a fine print inside of it and the added improvement of an embossed plate mark effect, the result approaches a fine etching. The picture reproduced herewith is only a fair example. Better workmen can make a proportionally better showing.

SHOOTING THE SURF
120

By W. KIMBEL

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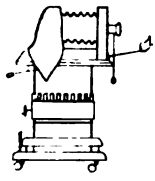
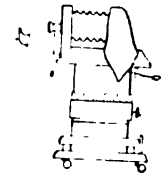


Some Studio Suggestions



By Arthur P. Boardman

Our Article Winning a Wold Air Brush This Month

It has not been over a year since I started in business for myself, after serving a full apprenticeship with a good, capable, although somewhat old-fashioned, professional, located in my home town in another part of the State. As I have made a success of my maiden venture, a success greater than either my friends or myself expected, I may be pardoned for assuming to instruct or advise others. In doing this last, I am not prompted by a feeling of superiority engendered by my small success; but rather by a feeling that, having so recently launched my own little business craft upon the sea of professional photography, I may be able to give a series of suggestions of a more close-range type than might be possible by the time my experience shall have had extended over a longer period. Dropping, as far as possible, this first person singular in favor of the rather dogmatic-sounding second person, I will proceed.

The real sale is made under the skylight, particularly if the proprietor does his own operating. A young lady behind a counter in the front of the establishment may secure from the customer an order for a certain number of pictures of a certain style and size, but the customer, in reality, does little more than suggest, approximately, what is desired, and does this mainly because there seems no way of avoiding it as a preliminary. Experience will teach you that the customer is quite likely to prefer something entirely different when the proofs are shown, and you will also learn that the style and size selected are no good criterion of the amount the customer is willing to pay,—if pleased with the work. For this reason, use plenty of plates, except as you may be quite sure that it is unnecessary and useless; and, above all, keep your sitter well pleased with herself, which is only another way of keeping her well pleased with you, while under the skylight. The difference in the size of the final orders, and the ease with which such difference is created, will more than pay for the extra plates; and cultivating a tactful and pleasing manner should be your first thought, regardless of the money value it has. The sitter who, upon examining a set of proofs, recalls a pleasant half hour spent with the operator, is pretty sure to like the results, particularly if there is a generous number of proofs, showing that he spared himself neither work nor material in his effort to please. How different is the effect when but two or three proofs are shown, proofs that recall the earlier feeling that the operator had gone through the business as if wishing to have the matter through with and the sitter away in the shortest possible time. To use a slang expression, "jolly them along" while under the light; of course, doing it in a different way with different

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BETCHWOOD MIDGET
Pedigree Griffon Bruxellois, bred at Betchwood, Surrey, England.

By GEORGE H. KNIGHT

subjects. Take a leaf from the book of the successful salesman. You know when he is "jollying" the man who hauls his trunk up from the station, and gets, in consequence, more attention for his money than anybody else in town, but he "jollies" you in a way that is less crude, and you like it,—and like him for it. And, what he is really after, you give him larger orders.

If the sitter has some preconceived idea that her picture should be taken in a certain way, humor her by doing the best you can to carry out her ideas. It gives you a chance to get acquainted and time for the sitter's reserve to wear away. Keep on talking and then make the rest as you wish. If friends or other members of the family are in attendance, make negatives of them. Quite often they may feel a desire to have their pictures taken, but hesitate in the matter. They think they will wait and see how the others come out, and perhaps never find time to come back. And before you are through with the original sitter, make one large negative. Unless your clientele is a very poor one, you will find it pays handsomely to do this. And here one caution; do not use your sitters to experiment upon. Be perfectly acquainted with your light. Call in some friend and try for different poses, effects, and lightings, whenever you have time. Then you will be in a position to give each one of your sitters something different; and remember that, while fancy poses are rarely asked for, few of your customers will be able to resist ordering extra pictures from such negatives if the results are pleasing and the expression natural.

Do not confine yourself to one or a few schemes of lighting. An angle of forty-five degrees may be the proper one, but not a few subjects look better with almost a direct side light. A certain type of face almost invariably takes on a hang-dog, dissipated look, except as the light is curtained down quite low. This is one reason why the amateur, and even the professional doing at-home portraiture, so often scores a success. In addition, this type of sitter really never sees herself under this unfavorable forty-five-degree angle, because her

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own mirror stands in such a position that she sees herself only in a side light. Have a good side screen and learn to use it intelligently. As a rule, use your light wide open and depend upon the screen, particularly with ladies. With men, cut the light down and try for the Inglis style of lighting.

In making full-length figures of officers and soldiers, the same platform can be used, the relatively higher position adding dignity to the pose. A stout person, or one quite tall and thin, does not look well in a full-length picture. Old people should be taken seated, and a lady whose skirt does not touch the floor will rarely be pleased with a full-length picture. If the weight of the body is thrown on one foot, a standing figure will be more pleasing, through having more action. The effect can be increased by having the body lean slightly forward. Many good standing figure poses can be found in the work of the artists who illustrate the stories in the popular magazines.

CATHARINE By MAY CLINE
"The amateur . . . often scores a success"

When a subject is quite stout, use a ground that contrasts but slightly with the dress, and make the pose a seated one if the full figure is wanted; but if head and shoulders only are required, use the camera quite low and make them standing; the superabundance of flesh falls away from the head and neck somewhat better. In posing men seated, be sure that the seat is high enough so that the knees have a downward inclination; and, unless the hands are small, keep them as far back as possible. Do not make the too common mistake of allowing your sitters to hide their hands, much less yourself suggest so doing. The hands, or at least one of them, should always be in evidence in

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three-quarter and full length pictures. In addition to keeping them well back, one can minimize their size by avoiding the full or flat view, but, instead, turning them so that the side is presented to the lens.

As a rule, the lens should be on a level with the sitter's chin, or a trifle higher. If the subject has a long neck, use the camera much higher than usual, lower when the neck is short. A drooping mouth is also improved by raising the camera. If the jaws are too prominent, raise the camera, bringing the lens on a level with the forehead, and bring the top of the head towards the camera. Do not pose both head and shoulders square to the lens. If the shoulders are square to the camera, turn the head to one side; with the head front, seat the sitter with the shoulders at an angle to the camera. The best pose will depend upon the attention given the ears, the hair, and the shape of the head. Never make a full view if the ears are large. Hollow cheeks require almost a full front view.

THE ROSE AND PEONIES By BELLE JOHNSON
AN EXCELLENT EXAMPLE OF THE RIGHT USE OF THE HANDS. COMPARE THIS WITH THE USUAL STIFF EFFECT.

If the nose is long, tip the head upward; if short, downward. Do the same when the chin is either too long or too short. If the mouth is crooked, make a three-quarter view with the crooked side away from the camera. Long faces should also have a three-quarter view, and using a long-focus lens will

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widen the face and shoulders. Using a lens of shorter focus, and making almost a full view, is best for round faces. Large eyes should be looking a trifle downward and the head so turned that the whites show as little as possible. Deep-set eyes require a side and front light. Pale blue or gray eyes should be kept in shadow.

If the cheeks are full, or the hair light, or both, make a shadow lighting. In case of high cheek-bones, use a low key of lighting. If the subject is wearing thick glasses that cause troublesome reflections, make a three-quarter view and bring a black ground close up in front so that there will be nothing to cause reflections. In making profiles, one will often find that the effect just misses being good through the nose or chin being too long. Quite an improvement can be made by tilting the top of the head toward the lens, or perhaps away from it if the arrangement of the hair permits the latter. And do not forget that you must do full justice to these elaborate coiffures that come before your camera.

PORTRAIT By HELEN P. GATCH
A SIMPLE YET NATURAL AND EFFECTIVE POSE

In taking children, use a good, large platform, one on which they will not fear a tumble, and have it at least eighteen inches high; twenty-four or twenty-eight inches is better. Use a light background and bring the extension out over the platform. Give them plenty of toys to play with and allow the mother to be present all the time. You can get acquainted with the youngster much more quickly, and no exposures should be made until you have the entire good

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will and confidence of the little subject. Never neglect to make a negative of the mother and child together; and if grandpa or grandma is along, be sure to get a picture of the old gentleman (or lady, as the case may be) with what is, undoubtedly, their particular pet. You are almost sure of an extra order.

It may be necessary to ask the parents to quietly step outside for a moment, but if they are allowed to share in the work of securing a picture, and find you are capable of displaying tact, skill, and patience, they will be pleased; and being pleased, they will prove good customers, and always ready to sing your praises.

But that must wait until another opportunity presents. However, a few words on the photographing of white drapery are appropriate, as belonging to the work under the skylight. I have found that white drapery such as wedding gowns and evening costumes are best rendered in the following manner: First, make the exposure with the lighting just as you would have it under ordinary conditions, but have a piece of fine, even mesh, black veiling across the lower part of the lens hood, just high enough up to screen only the white drapery. Next, after developing and fixing, and before washing, reduce the drapery part of the negative with a wad of cotton dipped in a straw-colored solution of red prussiate of potash. This combines with the hypo in the film and forms the well-known Farmer's reducer. Do not allow it to remain on the negative too long, but rinse under the tap from time to time, placing again in the hypo bath should the prussiate fail to act through lack of hypo. Lastly, after the negative is dry, coat the glass side with ground-glass substitute and work in, with a soft pencil and with a stump and powdered lead, high-lights on the edges of the folds and where bits of white embroidery suggest so doing. All of these will require a little practice, but practice that is easily obtained. Using the veiling in front of the hood may require an experiment or two to determine the right distance at which the threads are entirely out of focus and give just the desired amount of softness. One operator I saw working in a large city used ordinary red mosquito netting in the same way and for the same purpose.

The editor has asked for a few samples of my work to reproduce with this article. No illustrations are needed; and such as I might offer would be only ordinary studio work. A year or two later I hope to show a few pictures at our State convention, and will then perhaps feel that some less experienced worker might be interested in seeing specimens of my work.

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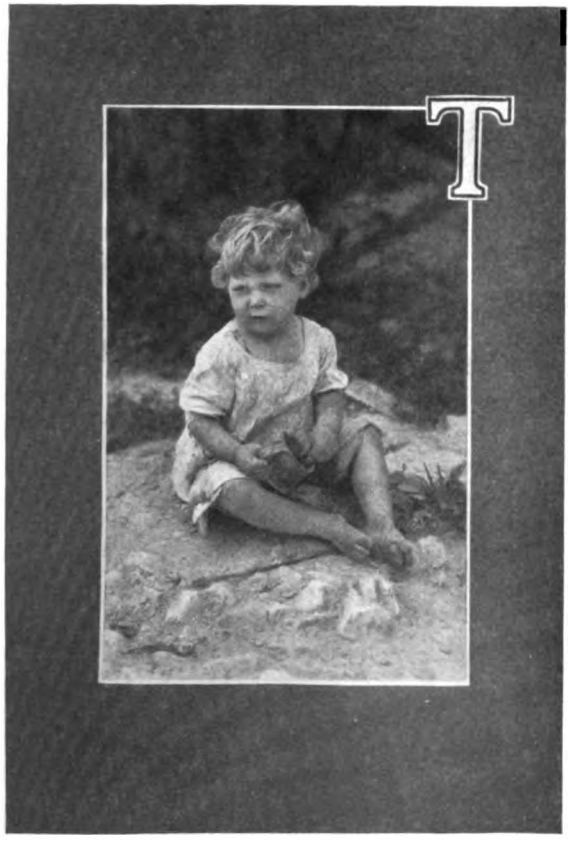
Real Child Photography

By R. R. Remark

Illustrated by the Author



"CORA TOOK SOME OF MY CHERRIES"

THERE is, to my mind, nothing in the whole field of photography that is so interesting and fascinating as child portraiture, child portraiture of the kind that is lacking in self-consciousness; and yet, most of the work along this line that is shown in the magazines and at the exhibitions, betrays the fact that the subject is conscious of the presence of the camera. Hardly less satisfactory is the studio plan of having the child appear interested in some toy or book that interests him only for the moment because of its strangeness to him. The interest should be displayed in something that has real interest for the particular child being photographed. A child's play is a process in the development of the mind, and the mind is that mysterious and silent force that does wonders and will do greater wonders in the days to come. To photograph the child in one of these stages of development, and with his mind on his play and not on the camera, is about as interesting and, when successful, about as satisfying as anything the camera enthusiast can undertake.

Stop and think that the child has been born with certain tendencies and inclinations, and that these will be seen creeping out at all times when the child

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is in a normal, healthy condition, the expression of character to be realized in the future. One boy will busy himself with some crude, mechanical device, such as a car, engine, and track. Here exists more than a passing fancy, and a mechanic of some sort is indicated in his makeup. Later he makes a harness for his dog, and constructs a rude cart; unattractive perhaps, but practical and on good lines. Again he spends weeks over tunnels in the sand, or on a miniature telephone or telegraph line, while his brother finds only a momentary interest in any of this work. It is generally quite safe to assume that the former boy will become a mechanic or an engineer, while the other will grow into something entirely different.

And when our boy grows up to be a man, the one in the picture, let us say, what greater gift of this worldly store could we present than a series of such pictures taken at different ages; pictures showing the gradual unfolding of his mind, its growth, progress, and development? But do not make pictures of this kind for the purpose suggested unless you are sure that the mind of the child is occupied with the work or the plan, and that it gives him joy, pride, and satisfaction. Many, many children never pass through these stages, and the blame can be placed only on the parents, who, too often seek to discourage the natural expression of these inherited tendencies.

But the immediate question is: How will I get these pictures without the child knowing that he is being photographed? It is quite simple if you really love children, as I assure you I do, and if you love to make the kind of pictures under discussion. If you only care to make pictures for the money there is in it, dismiss the idea, for you will not achieve success. You must love the work as the child loves the play at which you are about to photograph him. Place your camera in position on the tripod, and at such a distance that the plate will not be crowded, and yet the figure not be too small. Focus the object the child has been interested in and let him look through the camera or examine the image on the ground-glass, if he so desires; and then let him think that the picture is taken, that all is over, but the results cannot be seen until the next day. Now appear to be interested in the child's play, helping it make a few improvements in the setting of his make-believe scene. This last will give you an excuse for keeping him in the field of the lens and at the desired distance from the camera. The mind of the child is soon entirely engrossed with its play, the camera has been forgotten, and you have quietly and gradually stepped well to one side. The camera was made ready when the focus was secured, by setting the shutter and withdrawing the slide. To the shutter is attached a long tube and the bulb is lying on the ground or in the grass to one side of the selected position, but some distance from the camera. When the pose suits you and the child is absolutely unconscious of the camera, just step on the bulb and the picture is secured. Do not let the child know that it has been deceived or it will be hard to get a second picture, and several should be secured, if possible.

Set the shutter at a speed that will catch any ordinary movement, and that will mean a fairly large stop. The large stop will necessitate keeping the subject within a rather restricted space in order to have a sharp picture, but it is better to let an occasional good pose escape because the subject is not in

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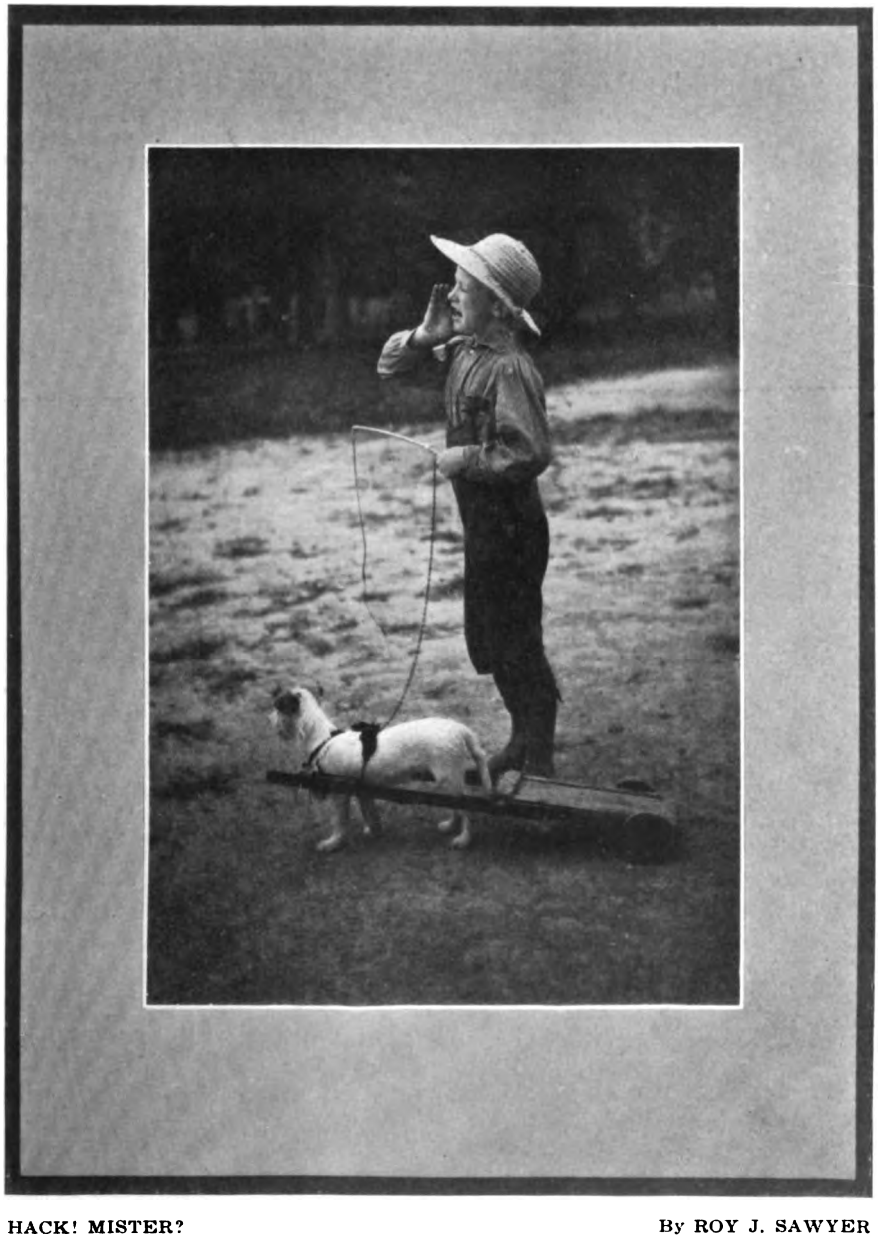

HACK! MISTER? By ROY J. SAWYER

the right focus, than it is to have the good one, taken when the subject is in focus, show movement through too slow a shutter speed or be undertimed through too small a stop. You will find that, following this plan, the results are much more pleasing than when one tries to improve upon nature by suggesting poses, much less insisting upon poses that you think are the ones the child should take. The naturalness of the pose will determine your success; and, by all means, have expression. And lastly, if the picture, when completed, does not suggest its own title, tear it up; it is a failure.

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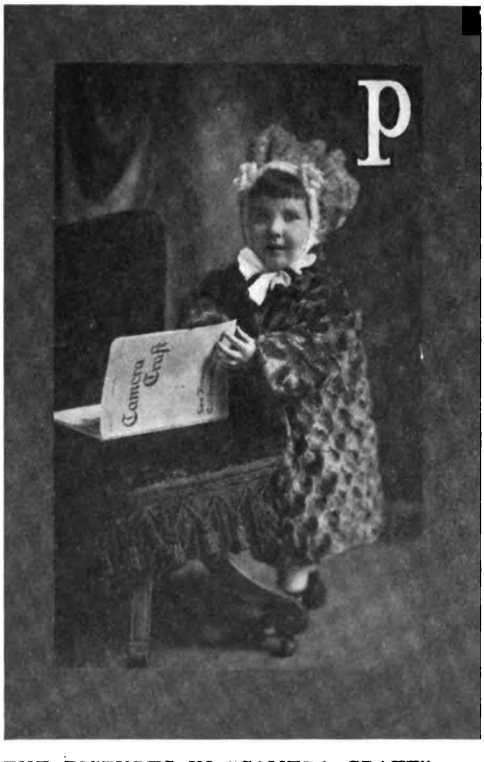
A Money-Making Suggestion For Professionals

By Milton B. Ward



THE PICTURES IN "CAMERA CRAFT"
By CADILLAC STUDIO, DETROIT

PROFESSIONALS, the wide-awake ones, are always on the alert for ideas, and here is one that I think will prove worth while to many of them. It worked out nicely in my own hands; and, while its season is now some months away, it will do no harm to start in at once and keep a list of suitable negatives so that it will be easy to locate them when wanted. In fact, the necessary prints can be made as suitable negatives are going through in the regular order of business. In actual practice, it will be found that it is more a matter of selecting the right customers, rather than any particular class of subjects, although young people are the most promising material.

During November, when business was none too rushing, I secured several inexpensive frames, narrow plain mouldings, both in ovals, and in square corners, suitable for the several sizes of pictures generally made. One long panel frame I fitted with a motto card reading: "Merry Christmas." I then papered the side of a good sized packing case with a neat wall paper, a striped design, placed it in a good light, hung the motto frame so that it came near the top of the right hand end, and one of the other frames, fitted with a patron's picture, so that it occupied the left hand end, and made a negative a little larger than post card size so that the wall paper design would print right out to the edge. From each such negative a post card print was made, and these in turn were mailed to the customer with a mimeographed letter reading as follows:

"I have taken the liberty of making a negative showing one way in which the picture of your little daughter can be made to give pleasure to both her friends and herself. I think you will agree with me that the result is a decided improvement upon the usual Christmas card of the stores. The effective

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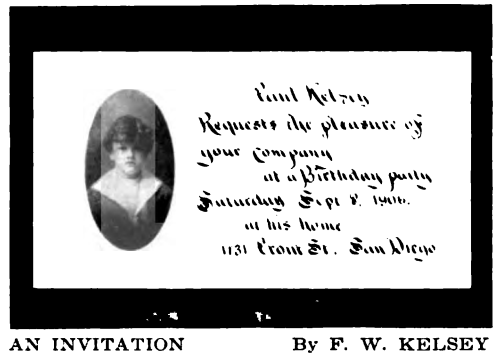
arrangement and the quality of the work turned out in my studio precludes any danger of these being confused with cheap, hastily made, post card portraits. Should this sample print meet with your approval, I will be pleased to supply duplicates of the same quality and finish at (here insert prices). Whether you order or not, please accept the card herewith, together with our own best wishes, as well as with our best thanks for your past patronage. Respectfully yours."

A surprising number of orders were received in reply to those letters, which, I should explain, were all neatly filled in with the name and address of the individual customers and signed in ink. Not a few called asking that a different picture be used, but I found little difficulty in having the request withdrawn by explaining that the negatives had been made during a dull period and lack of time made a new one practically out of the question. However, where new pictures of the regular order were desired, these objections were withdrawn. I am quite sure that the little reminders caused a large number of orders for regular work, and, beyond question, they would have proven well worth their cost as an advertisement, had not one order for the cards themselves resulted. Unlike much other advertising matter, I could feel sure that not a single one was thrown away, and I could easily believe that each one created a favorable impression in the mind of not only the recipient but in the minds of others to whom it was likely to be shown.

And the reader will ask, as the editor has done, why I do not show an example or two with this little article? Simply because I want the photographer who takes up the idea to work it out in his own way, rather than try a slavish immitation of my form of cards. The picture frame and wall effect is but one of dozens of ideas that can be worked out. Next season I shall use a small metal frame on a support, it in turn resting on a shelf or table, with a calendar showing the day, near at hand. A more simple means of securing suitable negatives would be to use a decorated mount that had been neatly lettered with the desired greeting. Still another plan would be to take a large card, cut an opening in one end, surround this with holly berries and leaves, held in place with black pins or glue; and, with the greeting lettered on the other end and the desired portrait behind the opening, photograph all down to the proper size. In writing to ask permission to reproduce one of my cards, the editor points out that the idea is not a new one, but one that he has seen mentioned as being used in England. This, no doubt, is quite true. I claim no originality for the idea. It came to me through looking over an old issue of CAMERA CRAFT, for October, 1906, and seeing the reproduction of an invitation card gotten out by a Mr. Kelsey for his son's birthday party. My first idea was to get out such a card as a greeting from myself to my customers, and then the idea came, why not get out



AN INVITATION By F. W. KELSEY

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an individual card for each of my best customers? Quite naturally, the thought followed that the customer would perhaps want duplicates, and the letter quoting prices resulted.

All For Two Dollars

By Lucy Farman Lindsay

There were some views of the Lake Washington Canal I was desirous of securing. Not having a camera in my possession, a friend very kindly lent me one. It was a Bull's-Eye No. 2. I made the desired exposures; but, in taking the camera to the photograph supply shop to have the film developed and printed, I discovered there were still two unused films in the box, and thought, as long as they were there, they might as well be used. It was a dull and disagreeable day, so I did not care to go outside with the camera; anyway, I had some sort of a hazy idea that snap-shots could not be taken on such a day. Why not take a couple of time exposures indoors? I had somewhere heard that one must make "time exposures" when taking pictures indoors. Yes, I would do that. Why not make some portraits?

My sister proved a willing subject, so, standing the camera on the library table, I "posed" her in a window-seat so that she looked good to me in the finder. I opened the shutter, paused, and closed it again. We considered it as a sort of a joke, seeing that neither one of us knew the first principles of photography. There was a surprise in store for us, however. The views proved more or less of a failure, but the portraits were beautiful. We were much exercised about them, had them enlarged, and they are now the subject of much flattering comment. The photographer who made the enlargements said to me: "You are an artist by instinct. You should take up photography. I am sure you would make a success of it." I was elated. I thought so, too.

Sometime previous to this, a photographer from Chicago lived next door to us for a few months. Home portraiture was his specialty, and he certainly did take some beautiful pictures, supporting a large family by his efforts. His portraits sold for sixty dollars a dozen, with single prints at ten dollars each. But goodness me! His basement was fitted up with no end of devices, and he had a whole wagon-load of cameras and paraphernalia, which stood him in thousands of dollars, so he told me; and he had been in the business fifteen years, after years of training in regular studios. Looking back at this, I realized the field that was open to me, but was somewhat discouraged when I stopped to think that I had no experience or any way of getting any, and had not a dollar to spare.

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After explaining the difficulties which overshadowed my ambitions, to the photographer in the supply shop, he kindly offered to rent me the proper sort of a camera for this work, at a ridiculously low figure. The developing and printing was to be done in his shop. Once more I was elated. I saw myself some artist. I arranged for sittings among my friends, and started out, as big as life, to make portraits. Fools still rush in where angels fear to tread. For a couple of days previous to undertaking my first sitting, I studied my book of instructions conscientiously. I stood that camera up at every angle

"AND POSED MY SUFFERING SISTER UNTIL SHE WAS READY TO FAINT"

and elevation, and in every nook and corner in the house. I studied my exposure scale, all the high-lights and shades available; made a reflector out of an old sheet, and posed my suffering sister until she was ready to faint. I used no plates. These were just practice pictures.

Let us cut a sad story short. Out of my first dozen sittings, every one was an utter failure. Not to be outdone by this catastrophe, I tried a second dozen, and the first failures were but repeated. I did not get one portrait out of all these attempts that was fit to print. The photographer to whom I cried in vain for an explanation of my different failures had no explanation to offer. He could only advise that "practice and patience made perfect." I was disgusted, and quit. No more portraits for me.

One day, going up a side street, I happened to pass a large supply shop, which, apparently, had just been opened. It occupied the whole basement floor

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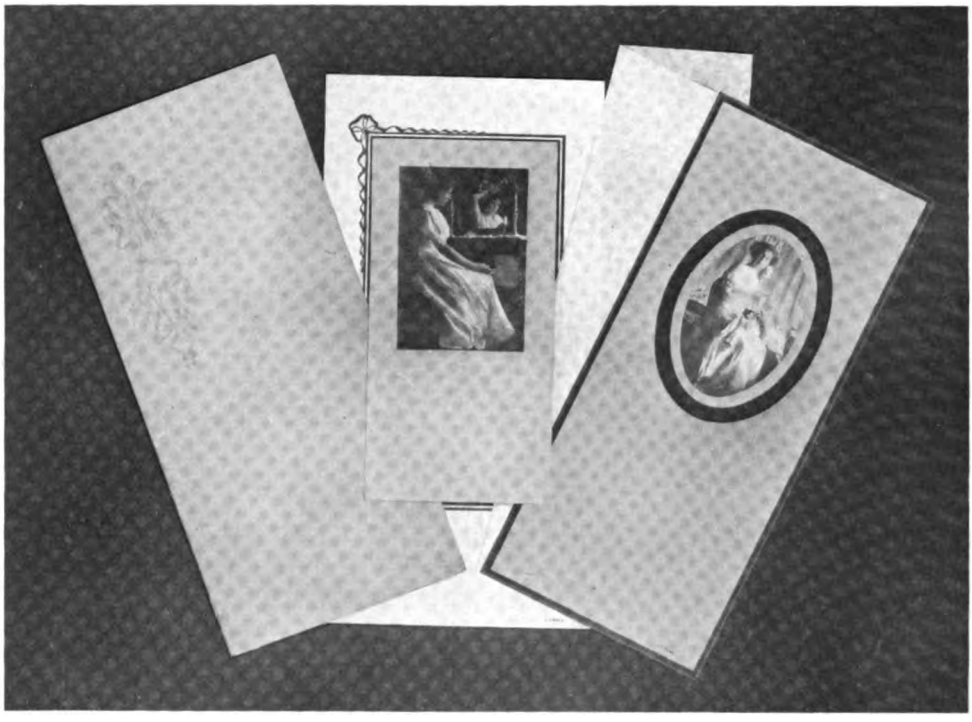

COVER OF ONE OF THE FOLDERS AND TWO OF THE ENCLOSURES

of a large building, and the handsome display drew me inside. The manager entered into conversation with me, and I told him of my sad experience in home portraiture. He informed me that it was no wonder that I had failed of success; for, so he claimed, the proper sort of camera had not been furnished me. It developed, upon further inquiry, that it would be impossible to rent the right sort of an outfit, and that it would require what seemed to me an almost bottomless purse to buy one. The lens alone was sixty dollars.

But the desire to take pictures was strong upon me. I must have some sort of a camera and I must take some sort of pictures. In a few days I went back to the shop and bought a camera; not much of a one, a Film Pack Premo Junior No. 1. It cost two dollars. That tiny black box proved my salvation To-day I am taking home portraits which have received recognition as a credit to the art. Not with the two dollar kodak? Yes, with the two dollar kodak. The photos are rather small, 2¼x3¼, and I sometimes make them much smaller, as a sort of a novelty. It is an easy matter to obtain detail with this kodak, but I always prefer to catch just the *tout ensemble* of the whole subject. Details are for architects, not artists. I call them photo-miniatures. That sounds more interesting and the pictures attract more attention under such a title.

With my discarding, for the present, an ambition to possess a complicated and expensive apparatus, also has been discarded the reflector, light screen, and the endless other things we are told we must have, and things we must do, to make home portraits. I fly in the very face of Providence, so to speak,

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and simply pose my subjects so that they appear satisfactory to me. With utter disregard for either photographic science or the poor camera, my pictures are taken; and, five times out of six, good, and sometimes extremely artistic, negatives are obtained.

There are just two rules of my own that I follow: First, have the subject as compact as possible; that is, all in the same plane, and as flat, by not allowing any part of the garments, or the hands, elbows, or feet, to extend towards the camera. Second, have the camera about seven feet away for half lengths, and about twelve for full lengths; with the lens about five inches below the level of the face. Following these rules, one *takes* the face, the principal part of the portrait; and the rest is just thrown in. Usually, I let the subjects do their own posing, simply putting in a suggestion here and there until they are as I wish them. Human beings, like animals, are more graceful and attractive than any artist can make them, when they are not frightened or ill at ease.

Six positions of each subject are taken. The developing I have done, as it costs but thirty cents; and, aside from the investment that a developing outfit would require, I feel that my time, at least, is worth so small an amount. I do my own printing, finishing, mounting, and so forth. My mounts are as novel as possible, and yet plain. People who appreciate really artistic work generally like simple mounts. The price per dozen is from five to ten dollars. When one stops to consider my meager experience and outlay, the profit is greater, in comparison, than that of the artist from Chicago,—and all for two dollars.

A RECEPTION ROOM

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

The paragraphs following still leave some of the original supply, sent in for the January issue, unused. The remainder will appear in the April issue, together with the contributions since made. All paragraphs received since our announcement in the January "Shop Talk" to that effect, will be so indicated in the next issue by the use of a nom de guerre or the full name of the contributor, as stated in that announcement. We would add that there is a slight falling off in the number of paragraphs being received and would ask that our friends do what they can to augment the supply.—THE EDITOR.

THE ELUSIVE LENS CAP: Take a piece of heavy thread, or fine, strong cord, about six inches long, draw it through center of lens cap and tie a knot inside. Tie the other end to your lens front or shutter. The cap will never get mislaid or lost but will always be "right on the job."—W. H. S., Wisconsin.

DRYING POST CARDS FLAT: Some of my photographic friends have asked me: "How do you make your post cards so that they stay so nice and flat?" Here is my method: After drying them in the usual manner, I moisten the address side with a damp sponge and place between blotters, under considerable pressure, for three or four hours. They will then stay perfectly flat.—W. H. S., Wisconsin.

PROTECTING BOTTLE LABELS: Take some old celluloid film, clean off the emulsion, cut into small shreds, place in a bottle and cover with amyl acetate, or acetone, or a mixture of the two. After a few shakings and a little time it will dissolve and give a clear fluid, which may be brushed over the labels with the aid of a soft brush or feather. Another useful mixture for this purpose may be made by dissolving Canada balsam in chloroform.—M. F. E., Maryland.

PRINTING UNDER MASKS: I put all my masks on the glass side of the negatives, fastening them in position with strips of gummed paper. They are always in place, easy to remove, and there is no danger of their injuring the film, or putting the paper slightly out of contact if they are cut out of fairly thick paper. Using a film negative, the film is, of course, fastened to the other side of the glass plate, bits of gummed paper holding it at the edges; these bits of gummed paper coming behind the mask and not showing.—W. M., Minnesota.

BLUE METALLIC SPOTS: It has been found to be impossible to keep small metallic spots out of even the best imported raw stock, and these spots become quite annoying in redeveloped prints with white grounds. The metallic spot, under the emulsion, is effected by the ferricyanide, causing a blue spot on the surface, much larger than the original metallic one. This may be removed in the same way that a blue print is bleached out. Immerse

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the print in a solution made by dissolving seventy-five grains of oxalate of potassium to the ounce of water, and the blue will soon disappear. Wash the print in the usual way.—L. J. H., New York.

CLEANING GLASS AND PORCELAIN: Measures and dishes get very dirty if not systematically cleansed immediately after use. A good mixture for obstinate stains or marks is as follows:

Water	10 ounces
Potassium bichromate	1 ounce
Commercial sulphuric acid	1 to 2 ounces

Add the acid to the bichromate solution very slowly, stirring well with a glass rod. Take care not to get the mixture on the hands or clothes. Nitric acid is the best for removing the black silver stains which affect porcelain dishes when developing gaslight prints. It must not, however, be used with xylonite dishes.—C. H. J., Kentucky.

TANK DEVELOPMENT WITHOUT A TANK: Perhaps one desires to develop a few negatives by the tank method and has no tank at hand, or he may not wish to go to the expense of a tank. Use the regular tank powders, mix up according to directions, but do the developing in a flat tray of the ordinary kind, covered over with a second tray of enameled ware or hard rubber. I do considerable developing in this way and find it much more economical, when I have only one or two plates to develop, as the quantity of solution needed is much smaller. A word to the wise is sufficient.—A. A. A., Minnesota.

PRINTING A CRACKED NEGATIVE: Lay the broken negative on a cleaned glass of the same size, and bind both together with gummed paper. This minimizes the danger of breaking the film, as we are supposing the glass only to be broken. Then place in printing frame, with paper, and attach string to the corner of the frame. Next, twist the string so frame will revolve, and then hang or hold before printing light until printed. I have tried this plan a number of times and always secured a print without any evidence of the crack in the glass; and such a crack shows very plainly when the print is made in the ordinary way.—J. C. M., Mississippi.

HYPO TESTS: After your prints have been washed for the regular length of time, it is a good idea to test the water for any traces of hypo. This may be done by the permanganate of potash test. The formula is as follows:

Water (distilled)	8 ounces
Permanganate of potash	8 grains
Caustic soda	7 grains

To use, fill a glass with pure water to which you have added three or four drops of the above potash solution, which should be violet in color. Two or three prints are then taken from the wash water and allowed to drip into the glass of potash solution. If hypo is present, the violet color of the solution in the glass will change to a light greenish tint. In such case the prints are returned to the wash water and allowed to remain until further tests prove that the hypo has been eliminated.—L. B. H., Texas.

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PROPER RELIEF IN BROMOIL: I do not suppose very many workers are using the bromoil process, but I know of one amateur who came very near giving up hope of making it work, through failure in securing the proper relief in the bromide print. Everything thought possible was tried as a remedy for the deficiency, until finally the experiment of using a plain hypo bath in place of the acid-alum-hypo one was hit upon. The difficulty was at once overcome and a nice relief secured.—W. M. B., New York.

NON-ABRASION DEVELOPER: The following formula is an exceptionally good one for a non-abrasion developer for developing papers:

Water	10 ounces
Metol	7 grains
Hydrochinone	30 grains
Sodium sulphite (dry)	110 grains
Sodium carbonate (dry)	200 grains
Potassium iodide	10 grains
Potassium bromide (10 per cent solution)	18 drops

The chemicals should be dissolved in the order given. The developer should be used full strength. The solution contains all the bromide necessary for a fully timed print.—A. A. C., Ohio.

PREVENTING SPOTTED NEGATIVES: No matter how careful one may be in the development of his negatives, be they film or plate, he will generally find, after the final washing, a certain number of small particles of foreign matter imbedded in the gelatine surface of the negatives; and these, apparently, refuse to be removed by the ordinary methods of washing. It has been my experience that most, if not all of these particles, can be safely and surely removed by gently swabbing the entire film surface with a small tuft of wet absorbent cotton, immediately after the final washing. With only a reasonable amount of care, and keeping the cotton thoroughly wet, these particles can be removed without the slightest danger of injuring the negative.—"Zeke," New Jersey.

CHALKY HIGHLIGHTS IN ENLARGING: In making good enlargements, the hardest thing one has to deal with is the hard, chalky highlight. The remedy is very simple. Take a thin piece of ground glass and place next the negative with the smooth side next to the glass side of negative. Fasten the two together, and with a small brush paint with glycerine over ground glass where highlights are most intense. This will leave a transparent spot that will allow the light to penetrate much more quickly and much detail will print in the highlights that would not otherwise. By being very careful in using the brush, fine draperies may be printed in this way, with very soft general effects, as the distance between the ground glass and film allows plenty of room for the proper diffusion. The same method can be used to great advantage in contact printing, and needs only a trial to convince one of its value.—F. M. C., Washington.

WHEN THE CAMERA TUMBLES: Did you ever try to point your camera up-hill and have it tumble back on you; or, at least, stand in a very shaky

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position? Well, if there is one leg of the tripod pointing out in front as it should, you can point the camera down hill as much as you wish; and, if you put one leg directly behind, as the novice sometimes does so that he can fall over it whenever he steps back of the camera, you can point up-hill as much as you wish.—W. H. B., Maine.

COPYING OLD DAGUERREOTYPES: I recently encountered quite a difficult task, the copying of an old daguerreotype; one that was badly faded out and stained, with finger marks showing. This was copied with slight enlargement, using a developer that gave good contrast. After washing, it was intensified with mercury. I next made a transparency by contact on a lantern plate, again developing for contrast. This was intensified, and enlarged on a plate giving a negative; but enlarging from the glass side of the plate, as the rights and lefts are reversed in a daguerreotype. The resulting negative was intensified, and then printed on a contrasty developing paper. A remarkably good copy resulted. The same method, except for the reversal of the image in enlarging, should work admirably in the case of lead pencil sketches or other flat copy. Another difficulty, hard to overcome, is scratches on daguerreotypes. An old-timer gave me an ingenious dodge, consisting in copying behind a glass silver bath, such as were used for wet plates. This is filled with water. There will be no scratches visible in the copy negative.—H. G. C., Michigan.

TONING PLATES: I want to give my fellow readers a formula for toning plates, one which should be of much interest to them, and the means of saving many plates which might otherwise be thrown away. A plate which is too thin to make any kind of a print can be made to render detail and strength after being treated to this process:

Make two solutions:

A.	Water	3½ ounces
	Nitrate uranium	15 grains
B.	Water	3½ ounces
	Red prussiate potassium	15 grains

Stir A into B slowly and add, also slowly, five and one-half drams of glacial acetic acid. When turbid solution clears it is ready for use. Have plate free from hypo and thoroughly soaked in water. Tone to color wanted and wash by hand, with no direct force on surface of plate, until water runs off smoothly. Long washing reduces intensity, and water striking plate, as from a tap, produces uneven results. —W. W. B., Iowa.

AN INEXPENSIVE ROCKER: Take a piece of half-inch board and saw it to such a length that it will comfortably carry four trays, more or less, of the size you generally use. In a row through the center, lengthwise of what will be the under side, drive three tacks, or what are better, small staples such as are used to put up wire netting, allowing the heads to project about one-eighth of an inch. It is understood that the board does not rock from end to end, see-saw fashion, but from side to side like a child's cradle. At the center of the upper side, so as to project towards the worker, tack on one end of a rough handle so that it extends out, much as does a griddle handle. Mine is

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made from a six-inch section of a wooden barrel hoop, the natural upward curve brings the handle up an inch or so above the level of the board and making it easier to grasp if the board happens to be tipped toward one. Put this on your developing bench and you will have a very handy device for rocking several trays at the same time. Perhaps we do not all realize it, but the continued handling of the tray warms the developer very quickly in warm weather, just when we wish it to be fairly cool. The habit of keeping an old box cover over the tray, as much as possible, tends to improve the quality of the negatives.—C. G. B., Massachusetts.

BLISTERS: Blisters frequently appear on redeveloped bromides and developing papers and while they generally dry down in the finished print, they can most always be avoided. The prints should be taken out of the redeveloper and without any washing placed in a fairly strong alum bath made of powdered alum and water. The prints may be left in the alum bath until an entire lot have been redeveloped. Then, instead of taking the prints out of the alum and placing them in the wash water, the water should be turned gradually into the alum bath to avoid a sudden change. With this treatment, not one print in a thousand should blister.—C. C. H., Canada.

DEXTRINE PASTE: Mix one pound of best white dextrine in enough cold water to make stiff paste, mixing them together in small doses of each, so as to insure a mixture free from lumps and clots. Dilute with an additional ten ounces of water, add one drachm oil of wintergreen, and just bring the whole mixture to a boil, when it should be like clear gum. Pour into pots, cover up, and in from twelve to twenty-four hours it will be set to a hard and white paste of great adhesive power. The dextrine must be the best white; inferior dextrine remains treacly on cooling.—G. R. B., Iowa.

THE CIRCULAR BASIN
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By Dr. C. H. GARDNER

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STEREOSCOPIC DEPARTMENT

Choice Of Stereoscopic Subjects

By Dr. C. H. Gardner

Once the most popular branch of photography, stereoscopy owes its decline in popularity more, perhaps, to the tendency to make an injudicious choice of subjects than to any other one cause. There is no question as to the pictorial possibilities with the stereoscopic camera; but the sad fact remains that, to many, the phenomenon of stereoscopic relief, giving as it does the modeling of life, suffices as an excuse for many otherwise worthless slides. Commonplace subjects are no more suitable for this branch of photography than for photography in any other form. The beautiful is everywhere to be seen in nature; and, given a faultless technique, the stereogram has the added advantage over straight photography that it derives from relief and complete perspective. The so-called stereoscopic revival appears, to us on this side of the water, to be more delayed than it perhaps does to our friends in Europe. And I fear it is so for the reason that over here we are not so keen in the striving for pictorial effect as are they; we appear to be more contented with slides of the "record" class. Public buildings, statuary, fountains, etc., need special treatment; even if the building is the most important in your city, the statue that of your noblest citizen, or the fountain the gift of your most beneficent resident.

IVY CLAD COLUMNS

By Dr. C. H. GARDNER

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You should leave to the commercially inclined the "objects of interest to tourists" *et id omne genus,* unless you can render them artistically. Choose your viewpoint with care, so as to exclude the ubiquitous telegraph pole, clothes lines, back fences, etc., remembering also that to the stereoscope many things are revealed that would not be seen in a single-lens picture, frequently appearing there as a blot on an otherwise fair landscape. Studio pictures, portraits, still life and genre compositions are especially pleasing and effective when properly worked out, as many slides which I have secured by exchange will bear testimony. In landscape work, do not include too much, unless the foreground is of sufficient interest to hold the attention, and beware of including, as a subordinate subject, any object, strange or curious, that by riveting the attention eclipses the main idea and calls forth queries as to its identity or purpose.

One is not bound to the rules of pictorial composition in stereoscopy; frequent departures from them are consistent with excellent results. But it will pay the stereo worker to bear them in mind, in so far as they are applicable, when composing his picture on the ground glass; and, doing so, the perfection of his results will be a stimulus to further effort in this line. Contrary to these rules, diffusion of focus is never permissible, the sharpest possible definition everywhere being essential to the best results. And here let me say that if you are using a hand camera and focusing by scale, it is important that you should know the point on your scale where the greatest depth of definition is to be secured with a given stop, so as to get the planes of your picture in equally sharp focus. Your choice of a subject should be influenced largely by its possibilities of relief and perspective; distant views, with the usual separation of the lenses, do not yield the required solidarity, but have the effect of being in one plane. For this reason the happiest results are with a subject in which objects or parts in successive retreating planes are photographed. In any event, a "strong" foreground yields the best results, for the nearest objects, standing out in bold relief, tend to throw more distant objects back into their proper positions. Bearing in mind the separation of your lenses, generally three and one-fourth inches, the foreground object nearest to the camera should not be further than twenty to thirty feet away, otherwise your slide will be lacking in stereoscopic relief. It is, of course, possible to obtain relief in the most distant objects with sufficient separation of the lenses, but in some cases it would require two cameras half a mile apart to secure this result. This was explained in Mr. Marley's article in the September CAMERA CRAFT.

Figures in landscape compositions, when not too obviously "posed" or placed, are always pleasing, though such figures or other objects should never occupy such a position that they block "the way out," leaving one to wonder what is beyond. Seek to make your slides of interest to any one, not merely of personal or local interest; a fault by far too common. And I cannot resist the temptation to step for a moment beyond the proper limits of this paper to say that, in order to secure the fullest detail in every part of your picture, the exposure should be ample to secure detail in the shadows, and your development slow enough not to block up the highlights. Develop to a fairly dense negative, as such seem to produce the best tones on printing-out paper.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, MARCH, 1911 No. 3

Let Us All Help

San Francisco will have the Fair, and that being determined, is it not the duty of our Western photographers, and particularly those photographers, the amateurs, who are supposed to be above mercenary consideration, to employ their ability and their equipment in showing the rest of the world the beauties of the country we are asking them to visit in 1915? CAMERA CRAFT believes that the duty is a plain one, one that should not be shirked. CAMERA CRAFT stands ready and willing to do all in its power to further the work. Let us have your suggestions as to a plan.

The above is inspired by a letter from a local amateur, C. Willard Evans, who believes that something should be done along these lines; asks that we take the matter up, and offers several suggestions as to carrying out the work. Mr. Evans points out that the amateurs of the Pacific Coast could, by a sufficient number of them pledging themselves to send out a given number of photographic post cards each month, be of incalculable benefit in advertising the scenic wonders, the varied industries, and the agricultural possibilities of this favored section of the country. Lantern slides could be easily produced from negatives made available by the same workers, and these would be gladly made use of by the Exposition Committee, the State Promotion Committee, and local camera clubs throughout the East, and other bodies. Kindly let us have your ideas on the subject, so that a plan can at once be put into operation.

Shop Talk

Since our talk with our readers last month, written at too early a date to make comment possible, we have received a flood of letters containing the most flattering commendations on the new department, "Paragraphs Photographic." This is all very pleasing and most gratifying, but our readers must not forget that it is, to use a slang phrase, up to them to keep this new department full and interesting. We want contributions, and it is certainly not a hard matter for any reader to jot down some handy wrinkle and send it along. We will see that it is trimmed up rightly before going into type, and any rough pencil sketch that may be sent along to illustrate the paragraph will be redrawn in the excellent manner that characterizes our artist's work.

The next thing calling for attention is the fact that this issue contains several entirely new advertisements, as well as new announcements from our old advertisers. Look the new ones up and make them welcome, not forgetting

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our old friends who have new catalogs and the like that they wish to get into your hands. There are a few discerning ones that realize what a fund of information they can get out of an expenditure of a little time and postage in writing for catalogs of photographic goods. One of the best informed amateurs that we have had the pleasure of talking lenses with in a long time, confessed, on his last visit, that all he knew about the subject had been gathered from the lens catalogs put out by the several manufacturers and their agents. Another recent visitor reports having gotten more information concerning flashlight work out of a little brochure that he received from an advertiser than from a number of lengthy articles on the subject. A third claims that he never could get an explanation of his failure in a certain direction with gaslight papers until he sent for and received a copy of an excellent little booklet issue by an advertiser in that line.

As we always like to close this talk with a request, here is the one for this month. Occasionally one of our readers, we feel quite sure, in moving from one section of the country to another, in finding that room becomes too valuable, even, perhaps, through such an ill advised act as giving up photography, finds he no longer wants to keep some files of photographic magazines and annuals that have accumulated upon his shelves. While there is hardly a market for such literature, it is not exactly right to consign them to the garbage man. We often have requests for back volumes of our own magazines, and frequently receive complaints that we are the only ones that seem to take any interest in supplying such demand. We do this by keeping in touch with those having sets of which they will dispose. Should you have any sets of such back numbers, either of this or any other photographic magazine or annual, and feel that you no longer want them, kindly drop us a line and state the price, if any, exclusive of express charges, which are, of course, to be paid by the party to whom shipped. By so doing you may avoid the destruction of what may be of great interest to some brother worker who is perfectly willing to pay the transportation charges and perhaps a small price in addition.

Dr. W. J. Furness Killed

William J. Furness, a prominent Harlem physician, was instantly killed about two o'clock on the afternoon of January seventeenth, by his automobile backing into an elevator shaft at the garage where he went to start out on his regular round of calls. The supposition is that he pulled the reverse lever instead of the forward speed; and, as the machine was fifteen feet from the shaft, he must have been too confused, when it started backwards, to shift the levers or jump out, possibly not realizing the danger. He was found eighteen feet below at the bottom of the shaft, his body pinned under the seat, his spine and neck both broken.

Dr. Furness was an enthusiastic amateur photographer, and one with exceptional taste and skill. Some years ago he took a most active part in the old International Photographic Exchange, hundreds of the old members having many fine examples of his work and a most keen recollection of his charming mentality as expressed in his kind and considerate letters, the two

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combining to prove an incentive to all who were so fortunate as to come within the wide circle of their influence. He took an active part in the formation of the American Federation of Photographic Societies, making friends with all with whom he came in contact. Although never seeking notoriety, his name rarely finding its way into the photographic publications, he was, as we have explained, more widely known and loved by fellow amateurs throughout the country than many whose names and work were widely exploited. He leaves a wife, Mrs. Harriet Vreeland Furness, the well-known painter of cats, and herself an amateur photographer whose Graflex is a constant visitor at the catteries in and about the metropolis.

Noted Photographer Dead

At the age of seventy-four years, Joseph Collier, pioneer photographer of Colorado, passed over the great divide. He came to this country from Scotland, in 1871, locating at Central City, Colorado, and is said to have been the first photographer to set up in business in the Centennial State. In 1878 Mr. Collier opened a gallery in Denver. He acquired a great reputation for his wonderful scenic photography. The deceased had been equally successful as a photographer in Scotland, his portraiture including many of the royal personages of his native land.

Trade Representatives Here

George Murphy, of New York, was in San Francisco the latter part of February, renewing old acquaintances and incidentally picking up orders for his well-known house. Mr. Mackness, of Burke & James, Mr. Valentine, of G. Gennert, as well as the genial Hoefle, of the Eastman Kodak Company, have all been here. In fact, some three or four of the best known of the Eastman force have been in evidence to such an extent that it has been almost impossible to find one of the local dealers not engaged in discussing prices, new styles, and the like, of the Eastman products. All are glad San Francisco got the Fair; all express surprise at the wonderful growth of the city since they were last here; but they are all old friends, and all most welcome without that part of it.

Rotograph Representative On The Coast

Max Adler, of the Rotograph Photo Paper Company, Philadelphia, spent several days in the city, the middle of February. He came down from Portland and left for Los Angeles. The firm which he represents has taken up the handling of this excellent brand of paper but a couple of months ago, yet Mr. Adler reports a heavy demand as already making its appearance as fast as it is learned that the papers are again obtainable in this country. A large number of former users were seen, and expressed their pleasure at being able to again secure the papers. Our new local dealer, Mr. King, placed an order for a representative line, and will stock as heavy as the demand will warrant. Mr. Adler will visit the Coast again in July, and we can promise him a still more cordial welcome as a result of the good impression made on this, his initial trip with the Rotograph line.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

COLOR PHOTOGRAPHS OF SUNSETS

M. V. Cremier writes in *Le Photo Gazette* on the value of the Lumière plate in recording sunsets; drawing attention to the great beauty of such effects, especially over water. Our California coast at this time of the year is particularly favored in this respect, and it is to be hoped that the accompanying table of exposure times, the results of M. Cremier's experience, may prove useful. With an opening of f-6.8, he found the correct time to be:

60 minutes before sunset (almanac time), 1 second.

45 minutes before sunset (almanac time), 2 seconds.

30 minutes before sunset (almanac time), 4 seconds.

15 minutes before sunset (almanac time), 8 seconds.

5 minutes before sunset (almanac time), 15 seconds.

With heavy clouds in the sky, the time should be increased fifty per cent.

THE RETOUCHING KNIFE

W. Sanderson, in *Photography,* calls attention to the great value of local reductions of the negative. He advocates the use of a small dissecting knife (in which, from personal experience, I agree), but states that a pocket-knife, brought to a razor edge, will do good work. He says:

"The use of the knife is as a local, very local, reducer. Try it on one of those water pictures where the whole surface of the river is broken up into little sparkling spots of light, and see if you can take out one of the spots completely. Remember, the gelatine film on the plate has a definite thickness, and that most of the deposit lies in the upper part of that thickness, so that only a thin shaving must be removed, and on no account must the knife go through to the glass. To prevent this, the knife must be held very steadily and in a particular way.

"The blade is held between the fingers and thumb of the right hand, as near the point as possible, the knife being almost vertical and the back of the hand uppermost. The tips of the fingers and thumb rest on the surface of the negative, so that the hand can be quite steady, motion being imparted alike to the fingers and the knife, from the wrist. The blade is then brought down, at right angles to the film, and scraped over the part to be pared down.

"The depth of the cut will be found to be quite controllable, but all the control must be one way. We must seek each time to take the thinnest possible shaving off the negative, no matter whether the total quantity to be removed be much or little. It must be gradually planed down, not scooped out. Power comes with practice, and it is easier than it looks. Some workers put a little retouching medium on the parts to be cut away. By making the successive strokes a little different in size, a kind of vignetting action may be exercised, and the boundary of the work will not be easily perceptible.

"The possibilities of the knife are wonderful. Intrusive highlights disappear under it. Little spots of sky showing between the branches of trees may be toned down quite easily. Those bright spots of reflected light from polished furniture which give trouble in interior work yield to it in an instant. A straggling hair in a portrait may be removed so that the place thereof knows it no more.

"When a negative is to be printed on very rough paper, say by the gum process, a deep shadow may be put in by shading; that is to say, scratching a series of lines right down into the film. This wants a master's hand. With any one else the results are tragic—or comic."

LANTERN SLIDES DIRECT

Yet another method of making lantern slides direct is described by W. Bennett in the *Amateur Photographer.* I have not yet finished experimenting with it, but it does not appear as easy or certain as the modified

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Balagny method I published last month. The procedure is as follows: "After development the plate must be rinsed in two or three changes of water for about two minutes; a uranium toning bath is applied. Directly this has been poured over the plate, lift it out, hold it up to the red light, and carefully note the density of the darkest parts, and then return it to the toning bath. If examined again in two or three minutes, the dark parts will appear much lighter, due to the substitution of the red uranium deposit, which looks light in tone by red illumination. With a little practice it will be easy to see when the original silver image has been entirely displaced. This examination is not really necessary, as with fresh solution the action is certain to be complete in five minutes, or less. Thorough toning is absolutely necessary. When this is judged to be the case, pour off the toning solution, and wash the plate thoroughly in three or four changes of water for two minutes or more.

"It has now to be exposed to light, for which purpose magnesium ribbon is advised. For the exposure to the magnesium the plate must be removed from the dish, unless the latter is made of dark-colored xylonite, or else the light will be reflected onto the back of the plate and cause a certain amount of fog. It is, therefore, best to lean it against a piece of black or dark red paper, which, in its turn, should be propped up against some article on the table. Having measured out two inches of magnesium ribbon, a match should be struck and the ribbon kindled, and held at about four or five inches distance from the plate. Then return the latter to the dish and again pour on the developer.

"Judging the time of development is the most difficult part of the process. If insufficient, the halftones will be fully out, but the shadows far too weak. If overdone, the slide may be foggy; but this is of less importance, as the fog may be cleared away by subsequent reduction. It should be continued until the positive image looks strong and full of detail, when held up to a fairly bright red light, and the whole surface looks black by reflected light, the highlights being still blocked up by the negative uranium deposit. At least, this is the case with amidol, but with rodinal the uranium may dissolve away at once, in which case development may be judged as when making a slide in the ordinary way."

Fixing is carried out as usual.

The developer used is one containing three grains of amidol to the ounce; and the intensifier:

No. 1: Uranium nitrate.....40 grains
Glacial acetic acid.....½ ounce
Water . . . . . .10 ounces
No. 2: Potassium ferricyanide.40 grains
Glacial acetic acid.....½ ounce
Water . . . . . .10 ounces

For use, take equal parts of each.

POTASSIUM BROMIDE USED IN DEVELOPERS FOR INCREASING CONTRAST

By Messrs. A. & L. Lumiere and A. Seyewetz.

It is, of course, well known that the addition of potassium bromide to developers produces, in varying degrees according to the developer employed, a retarding effect on the action of the developer, whilst increasing contrast in the developed image, within the limits defined in a previous article.

In the present study we have sought to elucidate the following points:

Is bromine the active and indispensable element in the manifestation of the above-mentioned phenomena, and can it exercise its action under any form in the state of a mineral or organic compound?

Are substances which contain no bromine, and which retard development, capable of producing the same effect as bromides on the contrasts of developed images?

Can the method of action of bromide in developers be deduced from the foregoing results?

For the purpose of ascertaining whether bromine is the active element in the action of potassium bromide on the contrasts of developed images, we added to one of the developers most susceptible to the action of potassium bromide equimolecular quantities of the following bromides, quantities corresponding to the amount of potassium bromide producing the maximum contrast: Sodium bromide, ammonium bromide, lithium bromide, calcium bromide, barium bromide, magnesium bromide.

The developer was made up according to the following formula:

Water . . . . . .100 cubic centimeters
Anhydrous sulphite..... 25 grams
Hydroquinone . . .. 10 grams
Carbonate of potash... 38 grams

and containing 24/100 grams of potassium bromide per 100 cubic centimeters.

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All our tests were made as follows: Different plates were exposed under identical conditions by means of the Chapman Jones sensitometric scale, and in such manner as to obtain in each case the appearance of the same sensitometer number. They were then developed comparatively with the test developer and with the same developer plus the various experimental substances. From the relative intensities of the faintest and strongest square we deduced the value of the contrasts of the image in each particular case.

All the soluble bromides gave similar results.

Hydrobromic acid and bromine water behaved in the same manner as the bromides.

The action of the bromates was slight, and could not be compared with that of the bromides; they had no effect of the image.

The action of the hypobromates is of no interest, as these substances do not exist in the pure state, and always contain bromides.

Amongst organic bromic compounds, we experimented with bromal and bromacetophenon. These acted similarly to bromides; but probably under the influence of the alkali of the developer they partially saponify, giving alkaline bromides.

This appears to be confirmed by the fact that, when added to a non-alkaline developer, such as diamidophenol, they are ineffective.

We also tested comparatively the action of the bromides and that of the other halogenic salts, chlorides, iodides, fluorides of potassium, of sodium, of ammonium and of lithium, used in equimolecular proportions, corresponding with the quantity of potassium bromide giving the maximum effect. None of these salts increases contrast; the iodides even diminish it, and during development transform the silver bromide into iodide, necessitating prolonged fixation.

Further, not only do these substances, unlike bromides, fail to remove the initial fog of the image, but certain of them increase it.

In a further series of experiments we tested the action of various retarding substances, such as sulphates, ferrocyanide and ferricyanide of potassium, and potassium bichromate; also the action of acids.

None of the former increased the contrast of the developed image. The acids we experimented with were hydrochloric, hydrobromic, hydroiodic, nitric, sulphuric, phosphoric, citric, and tartaric, of which hydrobromic acid alone increased contrast, probably by forming bromides with the alkali or sulphite of the developer. The other acids retard development without appreciably increasing contrast. This also is the case with soda bisulphite. In the case of non-alkaline developers, diamidophenol, for example, a small quantity of forty per cent soda bisulphite (from two to five cubic centimeters per one hundred cubic centimeters of developer) accelerates instead of retarding development, and produces, not an increase, but a diminution of contrast. With more than five cubic centimeters of bisulphite, the time of development increases with the quantity of bisulphite, and up to fifteen cubic centimeters of bisulphite per one hundred cubic centimeters of developer, contrast is accentuated, but to a much smaller extent than results from the addition of bromide.

If too little or too much bromide be added to diamidophenol developer, its effect is scarcely perceptible; this, doubtless, is the reason why the action of bromide on this developer was for long unrecognized. On the other hand, its effect is very marked when used in the proportion of between half and one gram of bromide per one hundred cubic centimeters of developer.

To sum up, the property possessed by potassium bromide of increasing contrast in the developed image is not common either to haloid salts or to other substances capable of retarding development.

The preceding experiments seem to indicate that this property is peculiar to bromine in the state of soluble bromide or to organic compounds capable of forming a bromide with the alkali of the developer. Whilst not enabling the theory of the action of bromide on developers to be elucidated, these experiments lead to the supposition that this particular action of the soluble bromides may be due to the combinations which they may form with the isolated silver bromide, and which combinations may not be possible in the case of other soluble haloid salts.

Possibly these combinations are less easily reducible than the silver bromide itself under the influence of the developer, thus explaining the increase of contrast by the use of these substances.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

SOME PROFITABLE FAKE PICTURES

I think I will have to start in by telling how it all came about. It was this way: An amateur friend had a negative of a group that had been taken in the back yard a few years before when he was not quite so critical as to pose and expression, and the screwed up faces, due to strong sunlight, and the rather awkward poses due to the lack of importance conceded to his results at that period, made the results such that there was no desire for prints. But more recently another group, made out at the beach at Land's End and having practically the same faults, proved more satisfactory than would have been a carefully posed picture. He reasoned it out that the applicability of any particular treatment of a group depended a great deal upon the surroundings. The earlier negative contained the portraits of two friends that had left for the East a year or more before, and a good group picture from that negative would be most acceptable to all the members. So our friend places the negative against the focusing screen of his camera, pencils a rough outline of the group upon the latter as a guide, and then takes a trip out to Land's End and photographs a portion of the beach with dashing waves and a rocky headland as a background, so arranging matters that these new elements compose well with the outline of the group as sketched on the focusing screen. The negative developed and dry, he was ready for the print. He first blocked out on the old negative, all around the group, and made a print therefrom in order to get the exposure time and also have a print for a mask. Then he cut this group out of the print, pasted it on the Land's End negative as a mask, first blackening it all over so that it would be opaque, and made a print from that masked negative to get its right time of exposure. The rest was simply a matter of good double printing, done under tissue paper in order to soften hard edges and hide the place where the joining came. The resultant prints were in great demand; they were excellent. The squinting eyes and unstudied poses seemed to be exactly the thing for the surroundings. A friend on the next block wanted some of the same kind made of his family; pictures to be sent to friends in other parts of the country, and the demand has grown until our amateur friend now has several engagements for each of the few days each month that he can devote to the work. He has been seriously considering the making of the groups by flashlight in order to supply the demand for which his few available daylight hours are not sufficient. In making the groups he now spreads a white sheet upon the ground or floor for the group to sit or stand upon, and hangs another behind their heads or any portion of the drapery containing detail that would be hard to follow in the blocking out process. In the double printing, such things as stray tresses, flowers, the end of a cane, and the like, are allowed to print right over the detail of the background, just as we used to disregard bare branches and feathery foliage in double printing of skies and landscapes in the days of printing-out papers.

AN OVERLOOKED OPPORTUNITY

There was a gentleman in the office recently that had some very interesting pictures to show. They were all made by gas light during the long winter evenings we have been having. Not that the exposure required long hours, but he found it most pleasant and instructive, arranging compositions of a few simple objects and then photographing the results. The exposures ranged around five minutes, using four gas burners with a combined power of about seventy-five or a hundred candles. Isochromatic plates were used, but no color screen; the yellow color of the light and the absence of strong blues to be held back, making such a screen not so necessary as under ordinary landscape conditions. The truth of the matter is, this gentleman has a daughter who is learning composition as a part of her art studies, and the two work together. Groups of flowers,

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groups of fruit, a few articles from the young lady's dressing stand, a work basket and accessories, the usual smoker's equipment, even a few odds and ends of writing material, all make individual groups that have most pleasing possibilities for study and final recording in photographic form. The illuminant is of such a character that its effect is easily seen and studied; and, where a tendency to harshness is feared, there is plenty of time for overcoming the difficulty by bringing a mirror up close to one side for a part of the exposure time, perhaps changing its angle during the time it is in use, in order to soften and equalize the lighting. He says he prefers so doing to the more orthodox plan of arranging the lighting at the start by means of reflectors, because he likes to exercise the control over the shadows that the strong reflection from the mirror gives. And, as two of the lights are movable, the arrangement of the lighting is really a very easy matter. I wish I could reproduce a few of his examples herewith, but he is, as yet, not thoroughly satisfied with his work in the matter of composition. At a later date an article, with illustrations, may result.

BUILDINGS ON A BUSY STREET

There is a certain business man up Market Street who had been wanting a picture of his store building, and he had wanted it for some time. And it has not been because he did not want to pay for a picture but because he wanted one of a certain kind, one without any pedestrians, street cars, or other vehicles, showing. For months past every photographer that came along has been encouraged to try his hand, and his price paid for at least one print. But his want has now been supplied and a nice order placed. The desire was fulfilled by an amateur, and the same amateur took a good order at a profitable figure. He went about it in this way: He first hunted up a lens that would just let him fill the plate nicely from the most distant desirable view point. Then he loaded a holder with the slowest process plates he could get. Then a five time screen was put on the lens, the lens stopped down to f-64 and an exposure of twenty minutes given. He really did spend half an hour on the exposure, as the slide was held in front of the lens occasionally as a pedestrian in light clothing came to a halt opposite a dark part of the building. But the resultant print was a joy to the maker, and to the business man as well; everybody was happy. It simply shows that going about a thing in a deliberate and understanding manner will give the results. The picture looks almost unnatural without any signs of life therein, but it is what was wanted. It certainly has the merit of lacking any distracting elements such as ordinary street traffic and travel usually impose.

FIRELIGHT EFFECTS

One sometimes wants, not the kind of firelight effects that are produced by putting flash powder in the grate and having the illumination from that point, but the effect of a brisk burning fire in a grate that is a part of an interior being photographed as a whole, either by daylight or flash, or a combination of the two. A visiting subscriber recently showed us some very fine effects of this kind and explained that the realistic effect of fire in the grate was produced by throwing a small handful of saltpeter on the hot coals a moment before the exposure was made. The next time you want to make an interior that includes a grate that is supposed to contain a briskly burning fire, try the plan suggested. If your results are as good as the ones I have seen you will be pleased with them.

COATING FOR LANTERN SCREENS

At a friend's house the other night we were entertained with a lantern slide exhibition of no small interest. Having, a few days before, had an inquiry as to a suitable paint for such screens, and noticing that the one used was homemade and apparently quite flexible, I inquired concerning it. My friend advised that his had been coated some years before and was less liable to crack than any he had ever seen. It was kept on a roller, unrolled and rolled up each time it was used. The composition is made up as follows:

Glycerine .....1 pound
White glue .....1 pound
French zinc oxide .....2 pounds
Hot water .....1 gallon

It is applied to the muslin while hot, and the cloth is preferably stretched on a smooth surface while being coated and during drying. The amount given above will coat a screen about ten feet square.

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W. H. Horton, Tupelo, a former contributor to the Texas albums, has accepted the post of State Album Director for Oklahoma. All the members in that State will please send him four or five of their best prints for the first album, which will be put into circulation as soon as sufficient prints are available. While we have only a small membership in your State, there is no reason why you cannot make up an album that will compare favorably with some of the others if you will all send in the prints. After this first album has gone the rounds of the contributors it will be exchanged for one from some other State, and this in turn routed to you. Send in your prints at once without waiting to hear from Mr. Horton, please.

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Wisconsin—H. Oliver Bodine, Racine.

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NEW MEMBERS.

2707—Rev. R. Howard Taylor, 214 Penn. Ave., Oxford, Pa.
5x7, 4x5 and 3¼x4¼, developing paper, of general views; for the same. Class 1.

2708—O. A. Hogue, Stickney, S. Dak.
Class 2.

2709—C. E. Stafford, Box 14, Eggleston, Va.
5x7 and 3¼x5½, various papers, of landscapes, views, groups, etc.; for general views. Post cards, general work. Class 1.

2710—G. M. Wolfe, Quinlault, Wash.
Class 3.

2711—Verne Weigel, R. F. D. No. 6, Guthrie Center, Iowa.
5x7 and smaller, also lantern slides, various papers, of views and portraits; for anything 5x7 or smaller. Class 1.

2712—Edward D. Davison, R. F. D. No. 1, Munnsville, N. Y.
5x7, 3½x3½, 3½x5½ and 2¼x3¼, various papers, of landscapes, historical scenes and photos, also stereo views and post cards; for views of scenery, post cards, stereo views, or anything, as I do not limit my work to any one kind Class 1.

2713—A. Harris, Box 143, Fairfax, Okla.
4¼x6½ or post cards, various papers, of nature scenes; for cabinets 4¼x6½ and Post cards. Class 1.

2714—C. S. Dunham, Nineveh, Ind.
Class 3.

2715—H. L. Sadler, Box 724, Missoula, Mont.
3¼x5½, developing paper, of general Montana scenery, Flathead Indians, Yellowstone National Park, and some A. Y. P. Exposition views; for unmounted prints in envelopes. Class 1.

2716—Donald C. Fitts, 12 Bedford Terrace, Northampton, Mass.
Class 3.

2717—W. N. Bird, Lock Box 143, Floral Park, N. Y.
Class 2.

2718—John E. Doren, 2632 Regent St., Berkeley, Cal.
Class 2.

2719—J. H. Cotten, Box 324, Honolulu, T. H.
3¼x5½, 5x7 and 6½x8½, developing paper, of general views and landscapes; for 3¼x5½ views. Class 1.

2720—H. Noyes Pratt, 413 E. Pine St., Lodi, Cal.
Class 3.

2721—P. E. Vogel, 637 Mechanic St., Columbus, Ind.
Class 2.

2722—E. F. Atwater, Box 235, Meridian, Idaho.
Post cards and 5x7, various papers, of miscellaneous views; for anything of interest. Class 1.

2723—Al Cummings, 2736 Seminary Ave., Chicago, Ill.
3¼x5½, developing papers, of views, park and street scenes, and anything of interest in a city; for the same on any paper. Post card size only. Class 1.

2724X—Lynn Short, Fort Yukon, Alaska.
3¼x5½, various papers, of general Alaska subjects, portraits of types and anything of interest; for post cards of general subjects. Class 1.

2725—P. P. Barlow, Box 15, Como, Colo.
4x5, various papers, of views and portraits; for anything of interest. Class 1.

2726—Mrs. Anna J. Merrick, 19 Sidney Place, S. E. Minneapolis, Minn.
Class 3.

2727—Bernard Magruder, 127 Roone Ave., Webb City, Mo.
4x5, developing paper, of lead mines, children and general work; for historical and general work. Class 1.

2728—P. H. Irving, Box 1691, Calgary, Alta, Canada.
4x5 and 3¼x4¼, developing and printing-out papers, of general views; for miscellaneous views. Class 1.

2729—Fred A. Walker, 712 School St., McKees Rocks, Pa.
Class 2.

2730X—B. G. Tackle, 766 20th St., Oakland, Cal.
Post cards and 3¼x5½, developing paper, of landscapes, street scenes, etc.; for anything interesting in prints and post cards. Class 1.

2731—Fabian McK. Smith, 2121 Fourth Ave., Spokane, Wash.
3¼x4¼ and 3¼x5½, developing paper, of mostly landscapes, scenes of city life, and anything particularly interesting; for unmounted prints of mountain, marine or landscape scenes. First-class work for the same. Class 1.

2732—Miss Lucile Dole, Madison, Cal.
Class 2.

2733—R. H. Appleby, 99 Center St., Santa Cruz, Cal.
3¼x5½, developing paper, of landscapes, water scenes, and other scenes of interest; for principally scenery. Mostly post cards. Class 1.

2734—Paul J. Quirk, Weed, Cal.
3¼x5½ and 5x7, developing paper, of landscapes, and mountain views; for the same and sea views. Class 1.

2735—Thurston Hatcher, 614 Cherry St., Macon, Ga.
Class 2.

2736—Mrs. E. Largilliere Ford, Soda Springs, Ida.
Up to 8x10, various papers, of Indians, mountain scenery and running water; for anything interesting. Class 1.

2737—H. M. Brooks, 215 Fourth Ave., Peoria, Ill.
3¼x5½ and up to 6½x8½, various papers, of miscellaneous outdoor scenes, and views of interest; for the same. Unmounted prints, good work only wanted. Class 1.

2738—Eva N. New, 302 E. South St., Lebanon, Ind.
Stereos, developing paper, of landscapes; for any kind of stereos. Class 1.

2739—A. Ray Welker, 601 W. State St., Marshalltown, Iowa.
5x7, 4x5 and 3¼x4¼, various papers, of buildings, landscapes, copies, children and various moving objects; for fire scenes, snow scenes, water views, mountains and motion subjects. Post cards or prints. Class 1.

2740—Dale F. Stansbury, Box 238, Williamsport, Ind.
3¼x5½, various papers, of landscapes, scenery, street scenes, historical places, etc.; for any kind, especially historical and other interesting views. Class 1.

2741—Dixie Sanasin, Hospital, Halstead, Kans.
3¼x4¼, developing paper, of landscapes and portraits; for general views. Class 1.

2742—George H. Scott, Lock Box 601, Maysville, Ky.
5x7 and smaller, various papers, of Kentucky views, and views of Niagara and vicinity, black and white or sepia; for views of Yosemite, Yellowstone, Indian life, and Hawaiian views. Prefer to exchange prints but will send post cards if desired. Would like for those exchanging to give title of picture and facts as to exposure, lighting, etc. Where the view is one of special scenic or historical interest, so as to require explanation, I would like a brief explanation either with the picture or in a letter. May be slow in answering exchanges as time is limited. Class 1.

2743—Mrs. Elmer E. Robbins, 101 School St., New Bedford, Mass.
Class 2.

2744—S. J. Crow, Frontier, Mich.
Class 2.

2745—Frank St. John, Fairmont, Minn.
Post cards. Class 1.

2746—J. C. Walker, 439 N. 24th St., care World-Herald Office, South Omaha, Neb.
8x10 and 3¼x5½, various papers, of photographs and views, homes, exterior and interior; for scenes, landscapes, homes, features, city and street scenes. Class 1.

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2747—Kenneth J. Van Sickle, 1 High St., Carthage, N. Y.
3¼x5½ and post cards, developing papers, of miscellaneous views; for prints or post cards of landscapes, wood and river views. Class 1.

2748—Allan C. Browne, Van Wicklen Place, Ozone Park, N. Y.
Class 2.

2749—Everett Morris, 35 Pollock, New Bern, N. C.
4x5 and 3¼x4¼, various papers, of landscapes; for miscellaneous views. Prints only. Class 1.

2750—George A. Chambers, Box 44, McGuffey, Ohio.
5x7, developing papers, of portraits, scenes, street views, buildings and groups. Post cards only. Class 1.

2751—Elizabeth Culbertson, 300 E. Vine St., Mount Vernon, Ohio.
Class 2.

2752—Jarvis E. Cutsforth, Gervais, Ore.
Post cards. Class 1.

2753—Edward Rapp, West Leesport, Pa.
4x5, various papers, of mostly scenery; for post cards. Class 1.

2754—Thos. H. Taylor, Box 343, Brownwood, Tex.
3¼x4¼ to 6½x8½, various papers, of outdoor life, scenery and street scenes; for the same. Class 1.

2755—Wm. Baker, Box 152, Parsons, W. Va.
5x7 and 3¼x5½, developing papers, of landscapes, mountain views, water falls and miscellaneous subjects; for Western life and scenery, portraits, river, lake and other views in general. Post cards and unmounted prints. Class 1.

2756—D. M. Boyd, Woodlawn Ave., Kirkswood, Mo.
3¼x5½, 4x5, 5x7 and 8x10, developing papers, of general views and aeroplaning at St. Louis, also ballooning; for landscapes, clouds or lantern slides. Class 1.

2757—Ed. N. Sweitzer, U. S. S. "Yorktown," care Postmaster, San Francisco, Cal.
3¼x5½, developing paper and post cards, of marine work and native scenes of Central America. Class 1.

2758—Robert J. N. Parker, Avalon, Va.
4x5 to 8x10, various papers, of portraits, landscapes, architectural views, etc.; for post card views or portraits, should I see one I admire. Class 1.

RENEWALS.

317X—J. C. Hegarty, Utahville, Pa.
3¼x5½ to 6½x8½, of landscapes and historical subjects made in various parts of the U. S. Class 1.

379—Ed. L. Graybill, 1115 N. McKinley St., Canton, Ohio.
Class 2.

777—Herbert R. Gregg, Bay City, Ore.
Class 2.

1362—Ira G. Christensen, Monte Vista, Colo.
Class 2.

1553X—George P. Morgan, 20 Ponteanna Road, Cardiff, England.
4¼x6½, 3¼x4¼, stereos and post cards, for prints and post cards of good subjects and technique, can be sure of a reply. The postage on letters and cards alike to England is two cents. Is also prepared to furnish enlargements to any size of Shakespeare's home and district, as well as of pictorial spots that have figured largely in history. Class 1 for good work.

1795X—Harry Bayly, Box 533, Burlington, Wash.
4x5 and 3¼x5½, prints and post cards, various papers, of Washington scenery; for scenes, from the tropics and foreign countries preferred. Only good work sent out. Class 1.

1853—Ray Moore, 926 No. Cedar St., Ottawa, Kans.
Class 2.

1854—Burdette Harrison, 210 Lock St., Tarentum, Pa.
3¼x5½, post cards or unmounted prints, various papers, of views; for the same. Only good work sent and received. Class 1.

1862X—Paul M. Breidert, 316 Summit St., Kendallville, Ind.
Post cards only. Class 1. General subjects, some stereos. Class 2.

2071—Brugh Werner, 454 N. Church, Decatur, Ill.
Stereos, developing paper, of anything that will make a good stereo; for same in lantern slides or stereos. Class 1.

2074—I. M. Reed, 660 61st St., Oakland, Cal.
Class 2.

2087—W. J. Luth, Plymouth, Wis. Class 2.

2196—Effie M. Howlett, 321 Wisconsin Ave., Oshkosh, Wis.
Class 2.

2211—E. G. Overholt, Box 200, Hamilton, Canada.
3¼x5½, various papers, of landscapes, marines and general views; for anything of interest. Post cards only. Class 1.

2229—Clare W. Faulkner, Dawson, Yukon Ter., Canada. Class 2.

2239—R. Titsworth, Fort Bliss, Tex.
Class 2.

2252—C. S. Gilbert, 1414 N. 2nd St., St. Joseph, Mo.
Post cards. Class 1.

2288—George A. Price, Summit, Ill. Class 2.

2329—Beny. Phillips, Selad Valley, Cal.
Post cards and prints up to 5x7, of scenery and animals; for all kinds of animal pictures and wild scenes. Class 1.

2336—Alfred H. South, 6 E. Front St., Media, Pa.
Class 2.

2343—F. D. Burt, 312 Elm St., Bennington, Vt.
Class 2.

2373—Mrs. George Nichols, R. F. D. No. 2, Dinuba, Cal.
3¼x5¼, developing paper, of mostly scenery; for the same. Post cards only. Class 1.

2381—Royal M. La Flower, Box 297, Port Angeles, Wash.
Will exchange for same in post cards or any size up to 6½x8½ on developing paper, for timber, river scenes, canyons, ocean boats, landscapes, city views, snow scenes, mountains and anything interesting. Lantern slides that are interesting or comical. Also logging scenes. Class 1.

2466X—W. F. Haver, North Fork, Cal.
Class 2.

2490—Fred J. Mitchell, Port Stanley, Ont., Canada.
Up to post card and 4x5, developing paper, of landscapes and lakeshore views. Class 2 for U. S. Class 1 for all others.

2415—Wm. Lander, Midway, B. C., Canada.
3¼x5½, developing paper. Class 1.

2597—Daisy R. Gorham, Box 12, Gorham, Kans.
3¼x5½, developing paper, of scenery, children and animal studies; for general views, prints preferred to post cards. Class 1 for good work only.

CHANGES OF ADDRESS.

1847—R. S. Gallie, Box 44, Little Rock, Ark.
(Was Pine Bluff, Ark.)

2202—H. H. Wiles, Cedarhurst, Colo.
(Was Rouse, Colo.)

2271—Sylvia A. Davis, R. F. D. No. 1, Hynes, Cal.
(Was Los Angeles, Cal.)

2500—B. P. Angle, Battle Creek, Nebr.
(Was Cowles, Nebr.)

2640—F. J. Soto, Gozos, 6, Puebla, Pue., Mexico.
(Incorrectly given in the December issue as F. T. Soto.)

2650—M. E. Merriman, Ossian, Ind.
(Was Rose Lake, Idaho.)

2657—Wm. George Grim, 850 Weiser St., Reading, Pa.
(Was 739 Ritter St., same city.)

2669—Chas. M. Laroutis, 3910 So. Park Ave., Los Angeles, Cal.
(Incorrectly given as Larvutis in our January issue.)

WITHDRAWALS.

1873—W. F. Miller, Barnhart Vale, B. C., Canada.
On account of traveling.

2230—W. J. Henry, Adamsburg, Pa.
Lack of time.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

BE SURE AND GET ONE

The handsome souvenir of the 1910 Eastman Advertising Competition is off the press and a copy has just come to hand. It is a fine piece of printing, about 8x13, containing excellent reproductions of the ten prize winning pictures and about as many others that were purchased from competitors for advertising purposes. The Eastman Kodak Company advise that they will furnish copies of this souvenir to all of our readers who will send in a request. And in doing so, we would advise that you get a set of rules for the new 1911 Contest. Equipped with these reproductions and a set of the rules, you should be able to evolve something that will stand a good chance next October. Simply address, Eastman Kodak Company, Rochester, New York.

THE NEW UNIVERSAL SHUTTER

Look up the new advertisement on another page, that of the X L Universal Shutter. It is one of those most satisfying of all advertisements, the kind that tell the reader about the thing advertised and how it works. The principle of this shutter is new; the avoidance of valves as a retarding device seems to be a marked advantage. It is automatic, another important feature, and having a speed of one five hundredths of a second, it covers that space between the ordinary shutter and the shutter with exceptional high speeds that are necessary only in exceptional cases, making it a desirable shutter in more ways than one. Get particulars of the manufacturers, as you will want to be fitted out with a good shutter when you start in with your photographic work this summer. Even if you do not buy a new one you will want to know something about the new ones available.

THE BISSELL COLLEGE OF PHOTO-ENGRAVING

Geo. Benedict, President of the Globe Engraving Company of Chicago, sent his son down to the Bissell College of Photo-Engraving last month to take a course in photo-engraving. Another son of Mr. Benedict's took the engraving course with them in 1905. Albert Van Leyen of the Van Leyen & Hensler Engraving Company of Detroit, has also entered his son for a course in photo-engraving and three-color work. C. S. Partridge of the Partridge & Anderson Engraving Company of Chicago, makes the third prominent engraver to enter a son at the Bissell College of Photo-Engraving during the past month. The fact that these boys all had an opportunity to learn the business in their father's plants, but preferred the college instruction, speaks well for the advantages of the Bissell College.

AN IMPORTANT INCORPORATION

Although advised too late for publication in our last issue, we are pleased to inform our readers of the incorporation of the Herbert & Huesgen Company, "Specialists in Things Photographic" (their advertising slogan), 311 Madison Avenue, New York City, with Henry Herbert, President; Melchoir S. Beltzhoover, Vice-President, and Charles H. Huesgen, Secretary and Treasurer. A charter, issued under the laws of the State of New York, has been granted the new corporation, which has been capitalized at $30,000.

The above incorporation is significant of the wide-awake methods and general progressiveness of an enterprising firm. From March, 1908, to December, 1910, Henry Herbert and Charles H. Huesgen were associated under the firm name of Herbert & Huesgen, at the above address. The location of their business, in the heart of New York's busiest section; their pleasing personality, backed by a sound knowledge of all photographic subjects, soon gained for them a reputation consistent with their ability and policies.

As sole United States agents for the famous lenses manufactured by C. Steinheil & Sohne, of Munich, Germany, they placed at the disposal of American photographers, both amateur and professional, high-grade

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anastigmats that have been hall marks of quality in Europe for the last fifty years.

We understand that the incorporation of their business, together with their increased facilities for supplying the demand of their steadily growing patronage, is but the beginning of many innovations and improvements, and this magazine wishes them all the success their efforts justly deserve. Good luck to you, Herbert & Huesgen Company. May you continue to prosper, and become an even greater power in the photographic world.

NEW PHOTOCHROME POST CARDS

Look up the advertisement of the E. C. Kropp Company on another page and send for samples of their several new styles of post cards. The samples that have come to our hands are exceptionally good values and are cards that thousands of dealers throughout the country would find good sellers in the shape of local view cards. Look your location over, make some nice views, take advantage of these prices, and let the dealers turn your enterprise into money for both yourself and them. If you are a dealer, get one of your local photographers to make you some nice views and get a stock of cards ready. They sell themselves and return a good profit. You may be able to find the views already taken. Send one in for a trial order.

OTTO GOERZ ANNOUNCEMENT

Mr. Goerz advises that he has opened a photographic supply house and is now in a position to supply all cameras and lenses on either the American or European market, and offers a most complete line of photographic goods.

His long experience, with the firm of C. P. Goerz, enables him to give expert advice in cases where the purchase of a photographic outfit is contemplated. If one has a lens or an outfit that does not work properly and will send it to him he will test it free of charge; the sender to pay the express charges only. If the outfit can be improved by repairing he will advise how, and his charges will be made as low as possible. Should one want to exchange his outfit or lens for something better, let him know your wishes and he will quote you prices. Fitting of lenses to shutters, and cameras will be done by experts, and every article sold will have his personal guarantee.

He also handles binoculars; will gladly send any camera, lens, or binocular, on ten days' trial, providing sufficient references be given, or one can pay for the outfit in advance, and Mr. Goerz will gladly return the money should it be returned after ten days' trial. Mr. Goerz says: "My name in the photographic world is my guarantee. I invite you to correspond with me on anything photographic, and I will gladly give you all the information you are looking for."

REPORTED BY WILLIAM WOLFF

L. M. Powell, the well-known photographer of Hanford, California, returned the thirteenth of February, after having spent five weeks brushing up in all that is new at the Southern School of Photography, McMinnville, Tennessee. Carl A. Bergmann, of San Francisco, conducted the studio during his absence.

W. S. Valentine has sold his Stockton place, confining his work to the Redding studio. Our old friend Babcock has returned to his old studio in Stockton, Vaughn & Keith having given it up.

The entire country looks fine, prospects are good for a prosperous year, the photographers throughout the interior of the State are all happy, and all are glad that San Francisco got the Exposition.

ELMIRA CAMERA CLUB

The regular Annual Meeting and election of officers of the Elmira Camera Club, held January eighteenth, resulted in the following members being chosen to serve during the ensuing year: H. E. Snyder, President; W. E. Bryan, Vice-President; Seeley Stage, Secretary-Treasurer; H. T. Stagg, C. W. Campbell and F. E. Scharf, Directors. The revised constitution, as submitted by the Constitution Committee, was adopted by a unanimous vote of the Club.

The Montreal Amateur Athletic Association Camera Club is holding its Fifth Annual Exhibition, April seventeenth to twenty-second. From all indications it promises to be the most successful one ever held by the Club. A number of new classes have been added and an increased number of prizes are offered. There will be five different classes with either one or two prizes, consisting of silver and bronze plaques, for each. Class A, figure studies, and Class B, all other subjects, are both open to all amateur photographers. Hand camera class open to all members of the Montreal Ama-

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teur Athletic Association. Club class and Green class open only to Montreal Amateur Athletic Association Camera Club members. Pictures must be received not later than April seventh. No entrance fee will be charged. Write for entry blanks to the Secretary, H. C. Stone, Montreal Amateur Athletic Association Camera Club, 250 Peel Street, Montreal, Quebec, Canada.

NEW LOCATION

GENTLEMEN:

We wish to inform you and the readers of CAMERA CRAFT that, after March first, we shall be located in our new store at 522 Sixth Avenue, New York City, near Thirty-second Street (Greeley Square), opposite Gimbel Brothers, and near Macy's, the Waldorf-Astoria, and only a few hundred feet from the new mammoth Pennsylvania terminal, and right at the northern extremity of the Hudson tunnels.

Here we shall occupy a floor space of three thousand square feet, store and basement, and shall have increased facilities for our old and new customers.

Very respectfully yours,

J. L. LEWIS.

THE VALUE OF BEING PREPARED

Our office does quite a little in the way of conducting an employment office, a memorandum file carrying, at all times, the names and addresses of both those seeking employment and those who are looking for help. And it would be surprising to one unacquainted with the subject, how hard it is to fit the right man to the right job. Just at the moment we have a place for a man who can do printing and retouching, doing both well. We have a number of operators who are retouchers, and a number of printers who are operators, but not a single man that can do both printing and retouching. And this is not particularly because very few printers can do retouching, but because the good man with a right knowledge of all branches is not out of a position. The wages that the right man would have earned in this position, now vacant, since it was made vacant, would have paid, for any of the unavailable men still out of employment, for a course in the Illinois College of Photography. And then there would be no more waiting for a special position to fit their limited knowledge of the business. There is one graduate of the college that drifts in here about every two years. But he is never looking for a position. He seems perfectly able to travel all over the country and find a position when and where he wishes. He says he will settle down some day and run a studio of his own. And he will make a success of it. We would advise those contemplating taking up photography as a profession to write for the new catalog of the Bissell Colleges, advertised on another page.

A HANDSOME BROCHURE

About the handsomest piece of advertising literature that it has ever been our pleasure to see, as emanating from a photographic studio, is the 6x8 brochure just to hand from William H. Rau, the well known Philadelphia photographer. It has been gotten out to signalize the equipment of his handsome new studio at 238 South Camac Street, into which he has just removed the portrait portion of his business. In it is made a modest announcement of the seemingly unlimited scope of Mr. Rau's photographic business. Examples of work, reproduced in sepia ink on dull surfaced buff paper, more than confirm the simple announcement of the capabilities of the establishment, as made in the text. Every branch of photography is within the scope of this model equipment which Mr. Rau maintains. If there are any Philadelphians who have any doubts as to the excellence of the work turned out by this splendid establishment, the booklet before us should remove them completely.

FRENCH SATIN JR. AGENCY

The popular dealer, J. R. Lewis, 379 Sixth Avenue, New York, announces that he has secured the Eastern agency for French Satin Jr. Blue Print Paper, which was on the market for so many years, and which was considered by many to be the standard in that line. He will also carry the same in post cards, and all will maintain the same high quality which characterized these papers and cards in the past.

NEW COLOR PLATES

The *Photographie des Couleurs* reports that the recent modification of the Omnicolor plate gives very decided improvement in the results. *Cepallo* announces that the firm of Guilleminot Boespflug & Co., Paris, Chantilly, is placing a new Dioptichrome plate on the market that is three times as fast as those now in use.

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GET SOME POST CARDS MADE

Write to the Albertype Company, 250 Adams Street, Brooklyn, New York, mention this notice, and ask them for their new 1911 sample album of their Photo-Gelatine post cards. Then figure it out how easy it would be for you to turn some of your good local view negatives into money-making propositions. When you find you can get these views printed in the photo gelatine process and hand colored in the most effective manner for less than a cent each, you have only to figure out how many could be sold in your location in order to make a handsome profit. Then all you have to do is to get the cards and your local dealers will be working for you while you are attending to your regular business. The matter is one that is well worth looking into by those having, or capable of making, good local views. The firm is the oldest in the business in this country and perfectly reliable in every way.

LARGER QUARTERS AND INCREASED FACILITIES

The fact that the Photo Autopress has introduced a new era in photo printing is evidenced by the announcement just received from the manufacturers, The G. M. Dye Printing Machine Company, Incorporated, who will move about February fifteenth to larger quarters at the corner of Seventh Avenue South and Fifth Street, Minneapolis. At no time, since placing the Photo Autopress on the market, only a few months ago, have they been able to supply the demand for these machines.

Without a demonstrator in the field and simply through their announcements in the photographic press, the orders have come in and are still coming in such numbers as to demand larger quarters and increased facilities to prevent their being hopelessly behind on their shipments.

The Photo Autopress is the first and only printing machine on the market today which gives the photographer the advantages of automatic mechanical action, as with a printing press, with electric motor drive and automatic timing of prints. The many features of superiority in this machine have been apparent to the progressive men in the profession, almost at first glance, and if any further inducement to purchase was needed, the guarantee of the manufacturers to save any man fifty per cent of his labor expense in printing, has been enough to clinch the orders and keep the factory working overtime for months. Add to this the favorable terms of payment offered by the Company, by which these machines virtually pay for themselves, and it would seem that no one need be tied down any longer by antiquated hand-labor methods.

Any of our readers who may have classed the Photo Autopress in their minds with other and older printing devices, and who have not taken the trouble to investigate it, are certainly doing themselves an injustice. This machine marks a decided step forward in photographic progress and no one can afford to deny themselves the very great money-making advantages it offers.

GENNERT'S NEW CATALOGUE

Gennert's New Catalogue No. 62, a copy of which is just to hand, contains a well defined and complete list of all photographic requisites, both for amateurs and professionals. It is printed on an excellent quality of half-tone paper, showing all cuts and type matter most advantageously. It is profusely illustrated, and every article is fully and comprehensively described. The cover is very artistic, being brown with a tasty design in green and black. Any reader sending a request for a copy to G. Gennert, 24 and 26 East Thirteenth Street, New York, or 16 to 20 State Street, Chicago, and mentioning CAMERA CRAFT, will receive one free of charge.

THE EURYPLANE ANASTIGMAT

The United States agency for the Euryplane Anastigmat has been secured by Ralph Harris & Company, 26 Bromfield Street, Boston, Massachusetts, and 108 Fulton Street, New York. This lens is made in Germany by Schulze & Billerbeck, and has met with remarkable success ever since its introduction. Many high honors have been bestowed upon this lens abroad, such as a Class A certificate by the National Physical Laboratory of London, and a silver medal at the International Photographic Exposition at Dresden, 1909. Fabulous profits are not looked for by the manufacturers nor by their agents, so the prices are particularly attractive. Send for a descriptive price-list.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. Those of positions wanted inserted free. No business advertisements will be accepted.

FOR SALE Gibson's Kodak Store, 24 W. Forsyth St., Jacksonville, Fla., established by Mr. Arthur F. Gibson six years ago, dealing in kodaks, cameras, photo supplies and picture framing, is situated in the business center of the city. This store is well established and is considered one of the best paying kodak stores in the business, including the best line of kodak finishing and view work. Owing to the death of Mr. Gibson in January, the store is for sale at a great sacrifice. For particulars address Miss M. B. Gibson, 24 W. Forsyth St., Jacksonville, Fla.

FOR SALE the leading studio in a progressive western city of 12,000 population. Studio new and up to date; reception room furnished in solid oak, mission finish; operating room 40 feet square, north light and new Aristo lamp, 8x10 portrait outfit, 8x10 view outfit and 5x7 view outfit. All rooms of studio steam heated. Rent $30.00 per month. Studio enjoys the confidence and patronage of the leading people in the city. An A1 business proposition for a good workman. Price $1500.00. Refer by permission to Fayette J. Clute, Editor of "Camera Craft". Address W. G. Emery, Vancouver, Wash.

FOR SALE San Francisco studio, good location, fully equipped and doing a good business. Must sacrifice. Good reason for selling. Address S. L., care "Camera Craft," San Francisco, Cal.

POSITION WANTED As retoucher and assistant operator. No objection to helping in all round work. Years of experience. Address I. G. F., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By good all round photographer; or will take partnership in sound business. Address W. M., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By a Japanese professional photographer; can operate, print and retouch; up-to-date in all branches, including commercial work. Address O. Y. P., 3036 Groveland Ave., Chicago, Ill.

FOR SALE First-class studio, two entrances on the two main streets; best location in town. Lease holds until after the fair. Address Shaw & Shaw, 1115 Broadway, Oakland, Cal.

FOR SALE Studio in a progressive Western city of about 15,000 population, with many small towns within a few miles to draw from. Operating room 20x30, single slant metal skylight, large reception room, dark room and work rooms; one of the best studios in the city. Five years' lease; rent only $14.00. Equipped with everything needed in a first-class studio for work up to 8x10. Located right in the heart of the city on main street, doing business right along. A good opening for a first-class man. Studio is well advertised and enjoying the confidence of the public. Act quick if you want to get the best chance of your life. For further particulars address Unique Studio, West 2nd St., Pomona, Cal.

FOR SALE or rent. Ground floor studio, newly refitted; fine location in best little city in California, doing eighteen hundred dollars yearly. One other; do not delay. Address Business, care "Camera Craft," San Francisco, Cal.

POSITION WANTED By salesman, 26 stockhouse experience in West and Northwest; also competent at commercial photography. Must leave East for better health. Best references. Address Carl, care "Camera Craft," San Francisco, Cal.

HELP WANTED A strictly first-class, all round commercial photographer, capable of taking management of $15,000.00 per year, systematizing and improving same. Salary or commission. Might consider selling interest after man has shown that he is capable; also printer wanted. Mile High Photo Co., 1524 Court Place, Denver, Colo.

FOR SALE 8x10 view camera, special extra R. R. lens, Wollensak shutter, 3 plate holders, canvas carrying case; good condition. Cost $50.00; will sell for $25.00. F. O. Schoeppel, Ft. Gage, Ill.

FOR SALE Studio in town of 30,000 in Iowa. Doing a good business; good prices; business center location; strictly up-to-date, fitted to 11x14. Sell on terms to suit purchaser, cash or time. Sell so business will pay for itself. It is a snap for a live man. J. B. Watson, Cedar Rapids, Iowa.

FOR SALE A No. 5 Voigtlander Euryscope portrait lens, 16x20, in perfect condition, $50.00. Also a Cooper-Hewitt photo-engraving lamp, two tubes with stand and wire, $30.00. The Albertype Co., 250 Adams St., Brooklyn, N. Y.

WANTED To buy a pair of condenser lenses, nine-inch diameter, and an enlarging lantern to take 5x7 negative; also B. & L. wide angle, medium, 5x7 lens; all second hand. Address F. Gargiulo, 754 Montgomery Ave., San Francisco, Cal.

FOR SALE A 3A F. P. Kodak and carrying case, first-class condition. $15.00 will buy it. Address Lewis F. Tuttle, Anthony, Kansas.

POSITION WANTED By receptionist; can also retouch a little. Lady has had several years' experience. Address O. C., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By all-around photographer with many years' experience. Good retoucher and familiar with every branch. Can take full charge of studio. Address J. P. Wedmark, 2121 18th Ave. So., Minneapolis, Minn.

FOR SALE Best paying ground floor studio in State of South Dakota, 30x110; living rooms above studio; no competition; equipments the very best, nearly all new. Large stock of picture frames. Reason for selling, other business. This is your bargain at $800.00; part cash, balance on installments if necessary. Do not miss this. Address D. C. Shoberg, Avon, S. Dak.

FOR SALE Fine, well located busy studios in good city, all money-makers. If you want money-making studios write us at once. Reason for selling, going on land in Mexico. Address D. J. Martel, Sioux City, Ia., 405 Fourth St.

FOR SALE or rent, cheap. A studio in good town, fully equipped. Doing a nice business and will sell or rent reasonable. Address Bert Naylor, Bertha, Minn., Box 214.

FOR SALE Studio in good Iowa town of 30,000, doing a fine business. Have other business and must sell quick. Fitted to 11x14. Good prices. Three other studios in town. Cash or monthly payments to suit purchaser. Everything up-to-date. Address J. B. Watson, Cedar Rapids, Iowa.

$350.00 Buys good photo business and outfit in Northern Iowa town; rent of studio $5.00 per month. For particulars address H. C. Johnson, Swea City, Ia.

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Beautiful collodion prints in sepia or purple tone are yours when you use

ARISTO GOLD PAPER

The manipulation is the simplest—the results the finest that can be produced.

For sepia tones just print, wash, fix. For purple tones print, wash in salt water and fix. The only chemical required is hypo for fixing the prints. The toning chemicals are in the paper.

American Aristotype Division,
EASTMAN KODAK CO.
JAMESTOWN, N. Y.

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For printing from Kodak negatives—for all amateur printing select the paper designed for the purpose—

VELOX

When you know this paper thoroughly, you will know how to produce just the effect you desire from every negative in black or sepia tone.

Get a copy of the "Velox Book" and become a Velox expert. This booklet is free at the dealers' or from us by mail, and tells all about Velox and how to use it.

Nepera Division,
EASTMAN KODAK CO.
ROCHESTER, N. Y.

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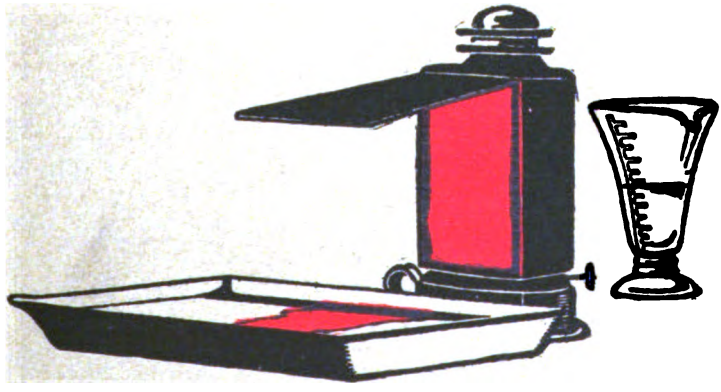
Vol. XVIII No. 4 APRIL, 1911 Price, 10 Cen

Camera Craft



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AN FRANCISCO, CALIFORNIA

Cyko is the choice of Scotland's foremost portrait photographer

On a visit to this country in behalf of photography he confers with our leading men. He marvels at sight of American art. When he gets home this is what he writes:

"Please dispatch by next mail as I wish to get on with it at once:

1	Gross	Cyko	Paper	Buff	10 x 8	inches
1	"	"	"	"	14 x 11	"
1	"	"	"	"	17 x 14	"

also the Professional Cyko Pointer of Instructions".

Cyko paper is manufactured by the

Ansco Company, Binghamton, N. Y.

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A PORTRAIT
By WM. WESTMAN

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

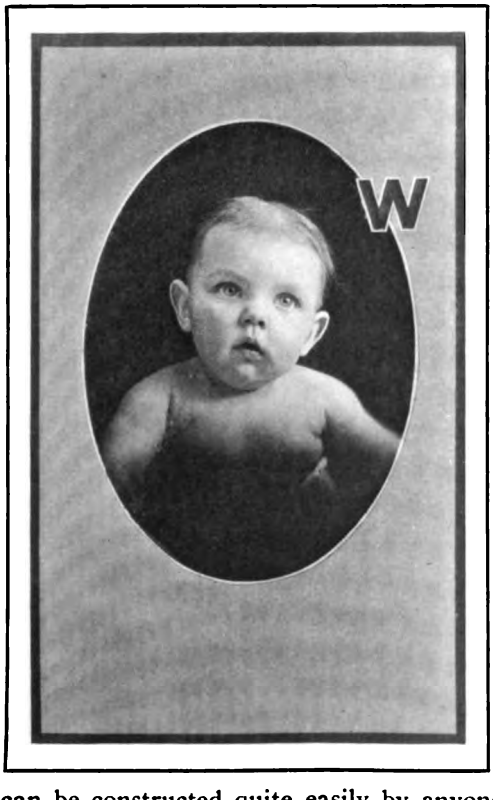
CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII APRIL, 1911 No. 4

Portraits By Flashlight

By Chas. H. Partington

With Illustrations by the Author



RITING in the February issue, on "Making Flashlight Portraits," I merely submitted a few illustrations, together with some general information, as to how they were made. The portraits were examples of plain and almost flat lighting, such as would result from giving no especial consideration to the work in hand. In that brief article I tried to give a general idea of flashlight work at home; but, for those CAMERA CRAFT readers who may wish to go into the work more deeply, I submit the following additional suggestions, together with illustrations of different effects to be obtained.

In order to determine just what result your final print will show, in regard to lighting, provide yourself with a sort of imitation skylight as shown in the drawing herewith. This can be constructed quite easily by anyone capable of using a saw and hammer, and the results to be obtained with it are certainly worth the time and small

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expense it involves. The material used was strips of white pine, 5/8x1¼, the various dimensions being shown in the sketch. The screen, on which is stretched a piece of white cheese cloth, is three feet square. In putting on the cloth be careful not to pull it too tight, as it tears easily. Draw it just tight enough so that it will lay flat and even. The legs or standards which support this frame are held together by cross strips, put on with screws, so that they can be easily taken apart and put out of the way. The screen frame itself carries a screw in each of two opposite sides and as near the center as possible. These screws rest in slots, about one inch deep, in the top of the standards. After the frame is in place, draw one of the screws fairly tight, as this will enable you to swing your "skylight" at any angle you may desire it to maintain. The bracket for holding the light is attached with two screws directly over one on the screen frame. This bracket should be such as to bring the light in the center of the frame and about one foot away from the cheese cloth. In my case I use a sixteen-candlepower electric globe, but those not provided with electricity can make the frame strong enough to accommodate a gas mantle or even a hanging kerosene lamp.

Now as to backgrounds: To do even fairly good work, the selection of a background should be seriously considered, and you should have at least three. The frame should be at least 5x6 feet for bust work, and constructed so as to stand wherever placed. On my frame is a gray-clouded ground, tacked and stretched permanently. This I bought in a supply store for one dollar and twenty-five cents. Besides this I have a dead black cloth, which, when needed, I can easily attach with thumb tacks such as are used by draughtsmen. A third is merely a white sheet that I can quickly put in place the same as the black one.

A reflector, such as I spoke of in my other article, is also needed. This should have a supporting frame similar to the "skylight" described above, and made to swing when necessary. The top of the reflector should stand about five feet nine inches from the floor. In use, the reflector should be placed as near to the subject as possible without getting it in the picture, and it should be at such an angle as to reflect the light from the flash in the proper direction.

The camera need not be special, but it is an advantage to have one that admits of focusing on a ground glass. As to the lens, almost any will do, but if you have an anastigmat of good speed, so much the better. Of course, the speed of the lens will control the exposure, but as a guide I give the following: All illustrations herewith were made with an anastigmat of seven inches focus working at f-6.8. With a fast isochromatic plate and your lens at full opening, eight grains of Victor powder will give all that is to be desired for bust work; the camera being about seven feet, and the flash five or six feet from the subject.

Now, as to actual work. Get your subject, camera and background into position, with the last at least two feet behind the first. After you have the subject in the required position, start using your "skylight," remembering that with the portable flashlight one has a most powerful lighting agent at his command. All one has to do to secure different effects is to move the light, not

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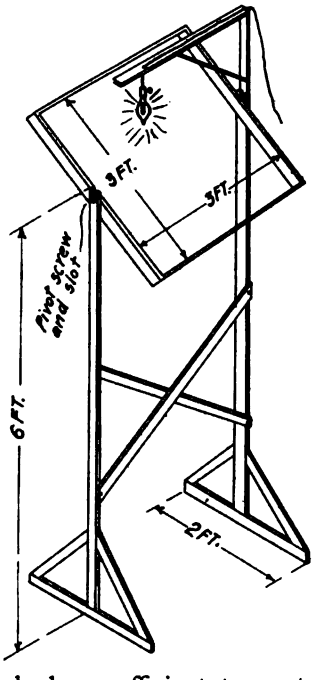
bothering the subject or moving the camera except to have the former turn the body or head in the required direction. In my work I use a revolving seat piano stool, which makes it easy for the sitter to turn from side to side. When the pose is to your liking, as seen on the ground glass, proceed to the focusing. If the "skylight" is not strong enough, have someone hold a lighted candle in the same plane as the face and focus on that. Then, if you wish a soft effect, throw the candle flame slightly out of focus by racking the lens a trifle toward the subject. You are then ready for the illumination.



Move the light to different positions and notice the change in effect on the subject's face. Watch the shadows cast by the eyebrows, nose and chin; also the highlights on the forehead and on the cheek farthest away from the light. Examine the portraits with this article and study any professional's work which you may have around. You will find that by observing the shadows you can so place your flash as to duplicate the lighting of any of them. Such study will help you greatly; and remember, the effect you see when shifting your light, is the effect you will get on your plate if the flashlight is set off at the same point.

With your lighting conditions as described you need have no fear that the subject's eyes will stare. If the light back of the screen is strong enough, the flash will have no tendency to make trouble in that manner. Another assistance your skylight will afford, and that is in determining whether the lens is protected from glare when the flash is fired. Have a hood over the lens and then see that it casts a shadow sufficient to protect it. When everything is ready, set off your flash close to the electric lamp, but be careful not to get it too near the cheese cloth screen.

The development of the plates is the next consideration; and I can only give my own method. It, of course, applies only to the particular brand I use, and the reader should, if he uses a different brand, work accordingly. But whatever one does after starting flashlight work, he should stick to one plate, one formula, one flash powder, and so on. This will give him more uniform conditions, and he should secure statisfactory results within a short time. After that, all will be easy and sure, and he can experiment with other material.

I use Cramer's Double Coated Isochromatic plates, and I strongly advise the use of this grade of plate, no matter what make; as halation, the one thing that must be avoided, is taken care of to perfection by double coated plates. As an example, take the white waste in the profile portrait herewith. The plate used should also be orthochromatic in order to secure correct color values in skin, hair, and drapery. For developing, use the formula recommended by the makers of the plates you are using, for you will find it hard to improve upon.

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You could hardly make a plate, if you tried ever so hard, and the manufacturer who can, must know what will give the best results with his product, so govern yourself accordingly. The formula I use is Cramer's pyro acetone, diluted according to instructions for double coated plates, and I develop twenty minutes. These plates require a diluted developer and long development in order that the bottom coating, as well as the top one, may be acted upon. When fully developed they appear very dense by the dark room light, appearing both overexposed and overdeveloped. Do not let this trouble you; they fix out more than does a single coated plate, and will be all right when fixed, washed and dried.

In my later experiments I found that tray development should only be used when contrasty effects are wanted. Personally, I do not care for such results; a soft portrait, in my estimation, being the only thing. And that brought me to tank development, but the vertical method, although good, did not appeal to me. By that method, with the plates on edge, it is necessary to reverse either the tank or the plates several times during development in order to have the results even and the action of the developer uniform over the entire plate. As I understand it, the reason for this is the developer has a tendency to settle or become denser and stronger at the bottom of the tank than at the top. But this turning or shifting naturally stirs up the chemicals and brings fresh, strong acting developer in contact with parts not needing it, thus bringing out highlights and light drapery stronger than required. Theorizing in that manner, I took up the horizontal method, one for which no special tank is required, one making use of an ordinary flat tray. I develop each plate

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separately and with fresh developer, using enough to cover the plate at least half an inch. I am careful to see that the tray is as near level as possible, then put in the plate and pour on the developer. The tray is rocked about ten seconds in order to clear away any air bells and insure even action. I then cover up the tray, even though the dark room lamp be perfectly safe, and allow to stand for twenty minutes. The temptation to take the plate out of the developer or agitate the solution in any way must be resisted. The flash has done the work and it will not pay to try to make alterations after development has once started. Follow this plan, and when your plate is finally fixed and

washed you will be surprised at the soft, yet snappy, results. Prints made from negatives developed in this manner, on a soft working developing paper like Special Velox, developed with a soft developer, give excellent results, and results that are worth trying for.

My reason for preferring this method of developing plates is this: The developing solution, being still, first effects the highlights, and continues until those parts have received their proper development. The developer then becomes exhausted at those points, and no further work, no undesired density, is built up. The developing solution, in contact with the halftones and shadows, continues to work with all its energy, bringing them out to their full advantage. The fact is, the horizontal method, with the agitation of the developer entirely cut out, allows the developer to do just the required amount of work on each particular part of the plate, and then stop, regardless of any other part.

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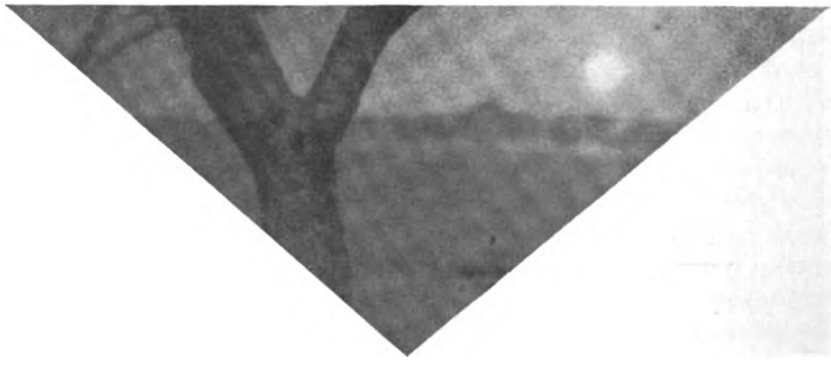
In fixing double coated plates, allow them to remain in the hypo bath at least fifteen minutes after the last trace of white has disappeared from the back. In washing, the best method to employ is to stand them on edge in a washing box and change the water every five minutes, doing this about twelve times. This will require an hour, but I have found it a very sure method of entirely eliminating the hypo from the film.

And a few final remarks. The light of the flash should strike the sitter at an angle of forty-five degrees. This is done by having the light as far above the subject as it is, horizontally, distant from the subject. I fire mine about five or six feet away. If you are a beginner at this work, make about four exposures on the same subject, using eight grains of powder for the first, and increase each exposure about four grains. This will give you a good guide, and when your standard is established by the results you will have no trouble in getting the correct exposure in future work. Another thing, do not worry if your shutter is open for a short time before the flash, for I have found that with a sixteen-candlepower light five minutes' exposure has no effect upon the plate. The lens was open that long before the flash when the picture of my baby, the one at the top of this article, was taken. But study out these things for yourself, think a little before you expose, watch your lighting. Use care and you will get results equal to those with daylight in a studio, and far superior, in my estimation, to daylight portrait work by the home window. A great many of my more recent portraits I consider equal to daylight work, and quite a few of them have been questioned as to their being genuine flashlight pictures. It is a common thing for people to remark that they "didn't think such results could be obtained, especially at home, and with a home-made outfit." I think the reason that the amateur has not done more within this line is because most flashlight pictures are wrongly made, and give most people the idea that the use of the flash means "soot-and-whitewash" effects. In reality, the flashlight is one of the most powerful and easily handled sources of light that the photographer has at his command; and, if studied, and not abused, it will repay the user handsomely for his trouble.



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Specialize In Your Work

By Roy J. Sawyer

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With Illustrations by the Author

PORTRAIT OF THE AUTHOR

Rightly used, the camera is a source of never-ending pleasure to its owner, but in the hands of the unthinking and careless amateur, the results obtained by its use are apt to be of a character far from pleasing to behold, let alone preserving. One can well stand aghast at the amount of photographic material utterly wasted each year, and that waste is not confined entirely to the beginner. I was looking over a collection of prints a few days ago, made by an amateur of several years' experience, and I was surprised at the quality of his work and the nondescript variety of his subjects. His album contained prints that showed signs of fading, some were printed too deep, some not deep enough, and they were scattered throughout the pages without method or meaning. And the subjects! There was variety supreme, ranging from dogs to locomotives; and the list comprised portraits, houses, street scenes, river views; in fact, every conceivable object of photographic endeavor was represented, all thrown together in fascinating and hopeless confusion. He admitted that his collection was rather tiresome, and that his interest in photography had flagged considerably since he first made his debut as an amateur.

The truth of the matter is this, when one regards the camera as a toy, to be used merely for the purpose of recording whatever strikes the fancy, regardless of its nature, the interest in photography is sure to wane; in some cases it dies out entirely. In the first place, if we wish to receive the maximum amount of pleasure and benefit from our work, we should specialize; that is, we should have a definite aim in view, and endeavor to become proficient in one certain branch of our art. The average amateur is prone to essay every conceivable class of subjects, without attaining any marked degree of efficiency in any particular one. For the past few years I have confined my operations almost entirely to landscape and flower work, and while I make no pretensions

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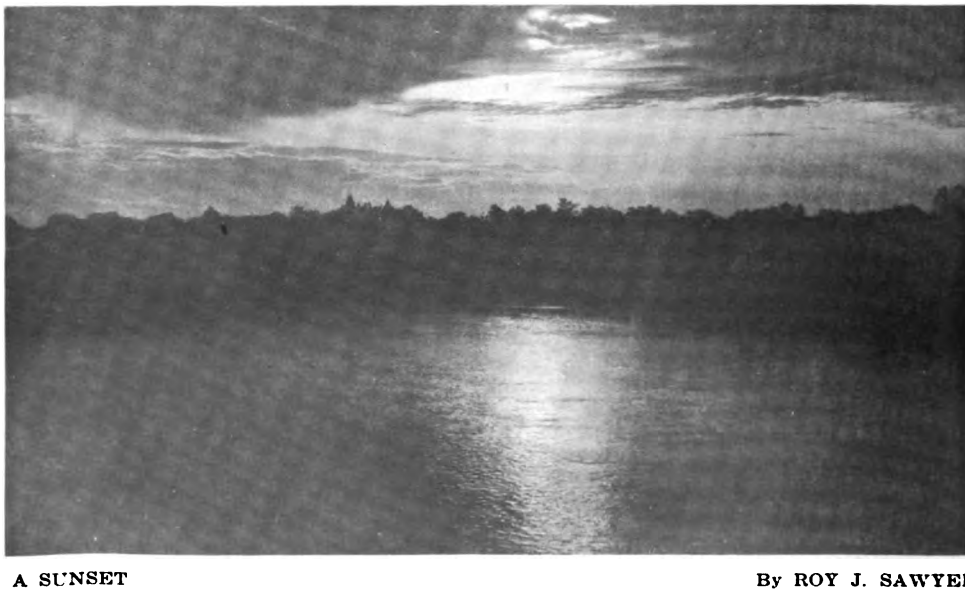
of having accomplished anything remarkable, I feel certain that the few good prints I have give me more real pleasure than would a collection of prints possessing no particular interest or merit. And the fact that some of my work has met with the approval of competent judges in pictorial work, has been an incentive to me to improve the quality of my humble efforts.

In landscape work, one should confine himself to a certain area and endeavor to seek out the picturesque "bits," bearing in mind that simplicity is a virtue and that a landscape needs but a few simple elements for its successful presentation. Don't wander over a large territory with a firm idea to expose plates, whether you find something worthy of record or not. It only dulls the enthusiasm, and causes the interest to wane. The three landscape studies accompanying this article were all made in a radius of a few hundred feet, and there is more promising material in the same locality.

I remember my first experience with a camera, when I went to that same locality to see what I could photograph. In those days nothing short of a panoramic view would suffice. I was then under the impression that a successful picture should contain several dozen trees and a bridge or two (beginners are, as a rule, great on bridges), and if perchance, any cows or horses wandered into my landscape, I regarded them as a valuable addition to the general effect. I never bothered about such trifling matters as light and shade, neither did it concern me in the least that nature underwent subtle changes at different times of the day. No, indeed! My whole feverish idea was to expose the plates I had with me before darkness intervened. It mattered not if I had one or a dozen, they all received some sort of an exposure, and many a day I wandered wildly about, seeking material for my all-devouring lens, with the inane notion that I must record something on each before returning home.



A SUNSET By ROY J. SAWYER

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SPECIALIZE IN YOUR WORK

JAPANESE IRIS — By ROY J. SAWYER

I soon accumulated a weird and wonderful assortment of pictures, which, for variety and general worthlessness, surpassed any of those in my amateur friends' collections. I received much praise for my efforts from my admiring friends, who assured me that I was indeed a genius. After indulging in landscape work for a brief period, I sighed for new worlds to conquer, and turned my attention to portraiture. Here I was doomed to disappointment. While the family stood in deep awe of my landscape concoctions, they did not take so kindly to my work in the portrait line. I endeavored to take large-size heads and bust pictures with a lens of five-inch focus, and the results I obtained were startling and fearful. As I was then still possessed with the "snap-shot" fever, I took most of my portraits in the sun in order to expose the plates instantaneously.

Not meeting with the amount of success in portraiture I thought I was entitled to, I went back to landscape again, from that to street scenes, and then to houses; in fact, I ran the whole gamut of photographic endeavor. There was no undertaking too great for me to tackle, although, in the vast majority of cases, my success was far from commensurate with my zeal.

I tried everything I read about, or heard of; changing my developer whenever I found a new one, used every brand of dry plate on the market, and if a new photographic "contraption" was put on the market, I seized upon it at once. "It is a long lane that has no turning"; and, becoming surfeited with this kind of photography, I began to realize that I was producing nothing worthy of preservation. I started to study the illustrations in the various photographic magazines, particularly those of pictorial character, and the fact gradually dawned upon me that photography had a different mission than

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simply furnishing amusement to the unthinking amateur. From out of the chaos of wasted material and endeavor, I emerged, and toward the goal of photographic achievement I directed my course. It was, at best, a slow process, as I had to learn the lesson of restraint in more ways than one. I found that the best results were accomplished by using one brand of paper or plates long enough to become familiar with it, before trying another. Real interest, I found, consisted of having a set purpose in view and endeavoring to attain a certain degree of efficiency in some particular phase of photography.

I soon found my interest increasing, and when I went in quest of landscapes with my camera, nature opened up a world of beauty that before had been invisible to my eyes. I made quality my watchword, and instead of seeing how many plates I could expose in a day, I found myself seeking those subjects worthy of being recorded. At the present time, when I take my camera to the woods or fields in quest of pictures, if nothing pictorial is discovered, I do not make an exposure. The knowledge acquired, of nature's lights and shadows, is an education in itself; and the experience gained by making them a study more than compensates me for the time and trouble involved. In landscape work, the best results are only secured by studying nature under various conditions of light and shade, and endeavoring to make every print suggest some certain phase of her varied moods.

Of course, one cannot expect to make exhibition pictures at the first trial, as a certain amount of knowledge or appreciation of composition is needed, but this can be acquired by practice and observation. Much can be learned by studying the works of those amateurs that have been awarded honors for their efforts; but to achieve success that will be merited when attained, one must picture nature according to his own conception, bearing in mind, of course, the rules of composition, and the effect of light and shade at different times of the day.

Be original in your ideas, and do not attempt to copy a pleasing example of some one else's artistic conception. A just pride cannot be entertained unless the results obtained are of their maker's own conception and execution. And don't think that one locality is better than another in being picturesque, or rather, in containing available pictorial material. Almost every locality has a meadow or woodland where pretty "bits" can be observed, if the ability to see be acquired; and, having learned to see, that which seemed commonplace before will take on a new aspect.

Simplicity is the keynote of successful landscape composition; therefore, if any degree of success is to be acquired, the aspiring worker must keep that salient fact in mind, and not try to include the entire countryside within the compass of his one small print.

In conclusion, I will venture to say that, if any of my fellow-workers will give this matter serious thought, deciding to confine their efforts to one line of photographic endeavor, they will find their interest increasing with each additional exposure; and the maximum amount of pleasure will be experienced as soon as one has the desire to produce work of lasting character.

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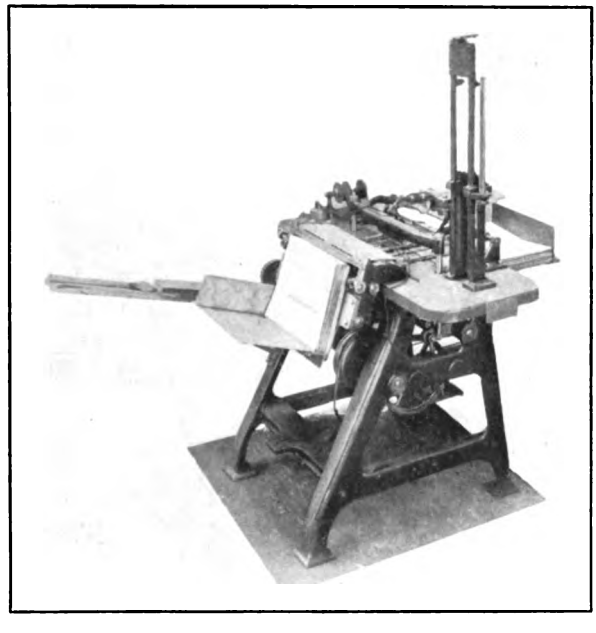
A Surprise And A Lesson

By Lawrence Heyd Smith

I recently ran across an expedient, which, though I suppose it has been used by others, I had never before tried. Late one afternoon I had a hurry call to make a couple of negatives for a large manufacturing firm. As I barely had time to catch the car, I took only two plates with me, all that were in the holders after the day's work. I make it a rule to always expose two plates on each subject, when a trip has to be made and the conditions are trying, as it can never be told with certainty just when you may make a mistake or a plate get broken; but in this case, if I had waited to load another holder, I would have gotten to the factory too late to get anything at all. On the ride over, I worked out, as nearly as I could, the exposure necessary, and then decided that it would be best to double that; the light is very apt to fool one late in the afternoon of a bright day. A bright light may be somewhat yellow, and a light that has the appearance of being none too strong may be very actinic. It is hard enough to estimate indoor exposures, but with the light doubtful, it becomes a problem.



When I reached the factory, it was plain that the work would not be easy, it being necessary to climb up on and work from a narrow bench, as a top view of the machine was wanted. If you have never tried to manage a camera and tripod on a two-foot bench, you have missed quite an experience, but one that I would not advise unless it were absolutely impossible to secure results from any other point. The camera was finally made fairly steady, and the exposures, about a minute and a quarter at U. S. 128, were made at four thirty p. m. Thinking it over on the way back, the only thing that bothered me was the fear that the time given might prove entirely too much.

Starting to develop the plates the next morning, it was made plain that there need have been no alarm on this score. It was fully five minutes before a sign of detail was visible, even in a window that was included in the view.

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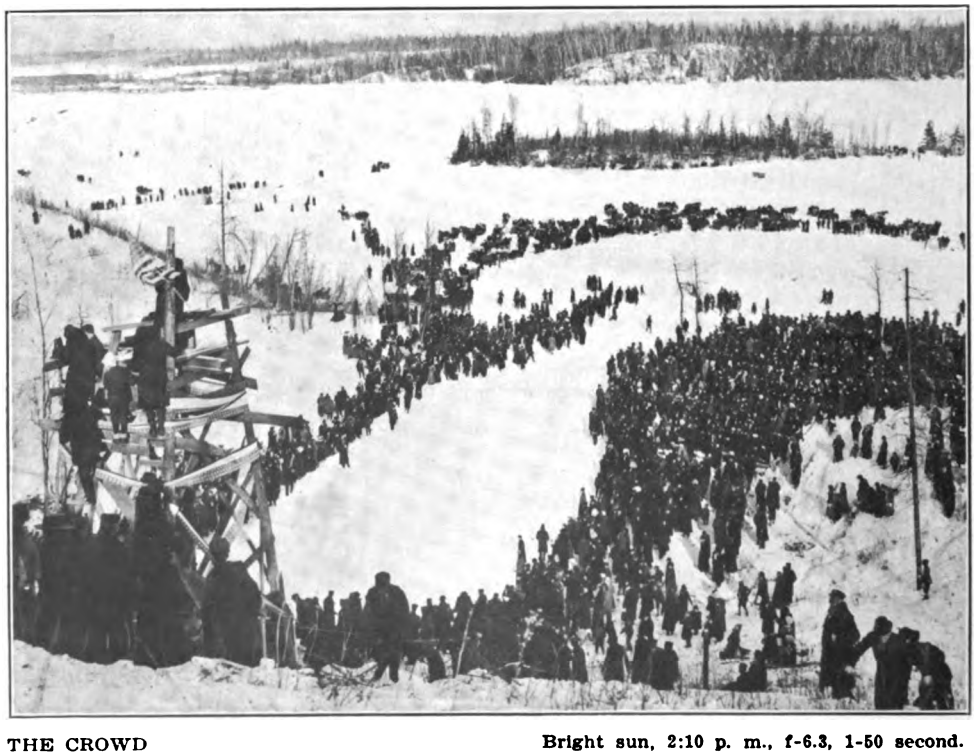
Rather disappointed, I decided that another trip to the factory would be necessary. As the plate then in the tray did not look as if it would be of any value, I covered it with a larger tray and left it to itself for fully half an hour. The developer was full strength and not the dilute solution that is usually advised for under-exposures. Being packed up for another trip to the factory at the end of the time mentioned, I remembered the plate, thought I would take a look at it, and was surprised to discover a very good negative in place of what I supposed could turn out only a failure. It was a little thin, it is true, but there was an abundance of detail, even in the shadows. The other plate was treated in the same way, and also came out very well—not perfect, but good enough to make a second trip to the factory unnecessary. Slight intensification was given with a ready-mixed product, to get a slight yellow color rather than to increase the detail.

I had no idea as to what the results would be when I covered the first plate. I had always thought that if a plate were left so long in a strong developer, so doing would cause fog; but, in this case at least, there was none produced. Nor were the contrasts more than usual, either. I shall not attempt to give the whys and wherefores of the above results, simply recording them so that others may try the same expedient in case of need. A print from one of the negatives, after the regular blocking out, is reproduced herewith.



THE CROWD
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Bright sun, 2:10 p. m., f-6.3, 1-50 second.

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Photographing Ski Riding

By A. M. Vinje

Illustrated by the Author

SKI riding is confined, in this country, almost exclusively to Michigan, Wisconsin and Minnesota; but I hope it will not be long before it becomes, as it justly deserves to do, a more general winter sport. Although I have attended the various local tournaments for several years past, I have not been able, until this winter, to get good pictures of the riders.

A little explanation of ski riding, for the benefit of those who have not had the opportunity of seeing this sport, may be proper. It originated in Norway and Sweden, where, on account of the heavy snows and general mountainous country, the conditions are especially favorable. In those countries it is recognized as the national sport, besides affording some localities almost the only possible method of travel in winter. In the States mentioned, wherever the population is chiefly Scandinavian, it is fast becoming the most popular winter sport. Aside from the jumping, coasting on skis is fully as enjoyable as toboganning. For ski jumping, a long incline of scaffolding is built at the top of the hill, this affording the rider a good momentum before reaching the "take-off," or point from which he jumps. This slide is one hundred feet or more in length, quite steep at the top, but curves out at the bottom so as to be almost horizontal at the lower end.

The rider, in jumping, must alight on his feet and slide to the bottom of the hill, without falling, in order to be successful. A fall counts thirty points against the rider, in scoring. The distance jumped, the position while in the air, and whether or not the rider falls or touches the ground with either hand, are all taken into account in awarding the prizes. No doubt many of my readers have seen a person "loop the loop" or perform some similar feat at the circus. Ski riding is far more interesting than any of these. The national record is now one hundred and fifty-three feet, and I myself have seen riders jump one hundred and forty-four feet.

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THE HILL

Bright sun, 2 p. m., f-6.3, 1-490 second. This shows the hill as seen from near the center. The scaffolding is shown at the upper left. The rider alights just below the lowest point shown at the right.

GOOD FORM

Bright sun, 2:10 p. m., f-6.3, 1-625 second.

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THE SCAFFOLDING — Bright sun, 2:30 p. m., f-11.3, 1-50 second.

A year ago last fall I put a focal-plane shutter on my 5x7 camera and started to get some good pictures. I soon found, however, that such high-speed work, under the usual conditions at this time of the year, was anything but easy. All ski hills face north, or in a northerly direction; and, as a rule, the foot of the hill is in shadow by the time the ski riding is begun. In order to stop motion, to give a satisfactory picture of the rider passing at right angles to the lens, and with the image formed about one and one-half inches high, I find it is necessary to give an exposure of from one six-hundredth to one eight-hundredth of a second. This exposure, between two and four in the afternoon, during January and February, is, to say the least, rather short, when using a lens working at f-6.3.

I have used fast plates, developed in a tank with pyro, for nearly all this work and find that my results are at least average. Out of twenty-eight plates, exposed at the last two tournaments attended, I printed from twenty-three. Three out of the five failures were due to my failure to expose quickly enough to catch the riders on the plate. It may seem an easy thing to expose quickly enough, but my experience has taught me that it requires some practice before one can make the exposure at just the right time, on high-speed work. A friend of mine, who has recently purchased a reflex camera, failed to get a rider on a single one of his first six trial plates.

I spoke of using tank development. It may interest the reader to have one more opinion on the subject. At first I was like all the rest, a little doubtful as to the tank method being of practical use. For the past two years I have used it almost exclusively for all kinds of work. I think that tray

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development is not to be compared with it, for good average results. I have several formulæ that I use for different plates and different work. As they are, with one exception, given by the plate makers, I will give only the one that is not. It is as follows:

Hot water (200 degrees Fahrenheit)	60 ounces
Carbonate of soda (dried)	2 ounces
Glycin	½ ounce
Sulphite of soda (dried)	½ ounce

For use, take six ounces of this stock solution to fifty-eight ounces of water. At sixty degrees Fahrenheit develop forty minutes, at sixty-five degrees develop thirty-five minutes, and at seventy degrees develop thirty minutes.

The illustrations herewith, except one, are from negatives made at the National Ski Tournament, held at Coleraine, Minnesota, Sunday, February twentieth, 1910. I am sorry to say that I have added no new ski pictures to my collection the past winter. The only days on which the local tournaments were held were cloudy and I did not go out. I hope to have better luck next fall, as I find the work very interesting and feel sure the results shown herewith can be improved upon.

A SPILL — Shade, 2:30 p. m., f-6.3, 1-330 second.

We all know that we store our minds with facts, thoughts and principles, derived from the accumulated wisdom of the past, chiefly from books. It is through our own memories that we hold on to these materials for our thoughts. —CHARLES W. ELIOT.

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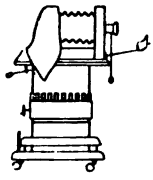
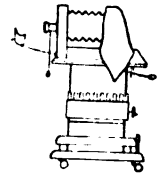


Some Studio Stunts



By Martin F. Elliott

Our Article Winning a Wold Air Brush This Month

From this series of articles that has been running through our CAMERA CRAFT, I have gleaned a great many valuable hints; and, at the risk of being a little slangy, I have selected the above title and will attempt to give a few suggestions from my own practice.

One often has to make a negative of a sitter, perhaps dark skinned and dressed in dark clothing, but wearing a large white hair ribbon, white feather boa, or white plume. Owing to their location, it is practically impossible to cut off the light with a screen. My plan is to keep a weak solution of acetic acid near at hand when developing; and, when the image of such a white decoration has developed almost far enough, take the plate from the tray, drain for a moment, and then paint over the offending highlights with a brush and the acid solution. This checks the development of such parts, and the negative should have a wash under the tap and be returned again to the developing tray to secure the necessary development of less favored portions.

Making copies is a most disagreeable job for some photographers; others find it quite easy and simple. Always put the picture to be copied in a printing frame and under a sheet of clean glass. You then have it perfectly flat and reflections will not appear in unexpected places, as they so often do when there is some curvature present. Place the printing frame where it receives the direct light, with a white card laying in front of it if the light be a little too high. If the light is entirely from the side or from above, the grain of the paper is sure to show. Give a fairly short exposure and develop with a strong pyro developer, well restrained with bromide. Work for contrast, as copy negatives are always inclined to be flat and lifeless. In extreme cases, where the surface of the print is badly scratched or cracked, give it a coating of glycerine and squeegee it in contact with the clear glass used in the printing frame. This has a surprisingly good effect in minimizing the defects in the copy negative.

Use a white background for children, for dainty misses in light drapery, and for negatives to be vignetted. When developing, take them out of the regular developer just before the image of the sitter reaches the desired density, and finish in a strong pyro developer, one that is extra strong in pyro. This will generally give the white ground good density, while adding but little to the rest of the negative. A white background calls for a high-keyed lighting, which in turn calls for a shorter exposure. Some operators use too low a key

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of light for white grounds and too high a key of lighting for black grounds. Do not let the light fall on your black ground, and keep it three or four feet behind the subject in order to get away from the "pasted-on" effect. Allowing some light to fall between the sitter and the ground, but not on the latter, also helps wonderfully in securing an effect of atmosphere. Remember to give more time for your low-keyed and black ground effects.

I show every customer, after his regular order is filled, a re-developed enlargement from his best negative. I always trim these to an odd size, either an inch narrower or an inch shorter than the stock sizes of frames, carrying my own frames in these odd sizes. This is shown at the time the regular order is delivered and permission asked to place it in the window for a few days. A fair price is made for the picture and frame together. It is not forced upon the customer, and if not sold at once, a courteous letter is written a few weeks later, asking if the sitter would not like to purchase it, again naming the price. A third letter is written a few weeks before Christmas, suggesting that it would make a nice Christmas gift at a very reasonable price. The number of these enlargements that can be sold will surprise any one who is only familiar with the rather ancient method of trying to take orders for an enlargement by showing a sample from another and perhaps entirely different kind of negative. Most people have been disappointed with orders so placed in the past, and it is necessary to overcome their fears by showing the actual work.

The strong point of the above plan is the fairly salable stock of prints that you will have on hand, all ready for delivery, just when the Christmas rush comes on. In fact, I prefer carrying these enlargements along to that season to trying to force them upon my customers at the time of delivering their regular order. I generally explain that these pictures are not destroyed for six, eight, or ten months, as the case may be, in order to carry the time past the next Christmas. Another plan, but one that pays only indirectly, is to make an extra print on each order, mount it on a calendar card, write the customer's name and address, and one's compliments, on the back, and put it away. These calendar mounts are quite cheap directly after the first of the year. Remove the date pad and use as above. Stick on new date pads the last week in November and mail them to the addresses on the back. Your customers will be highly pleased, your holiday business will be increased, and many new customers will see the calendars and be tempted to try you for their own pictures.

About a year ago, a demonstrator showed me how to overcome halation when photographing interiors in which strongly lighted windows came within the view. I find it more effective than using non-halation plates and working in the ordinary way. A long exposure is given, about five times normal, and the plate is then soaked for about two minutes in a saturated solution of potassium bromide, made about milk warm. It is next given a slight rinse in water and then put into a strong pyro developer, in which it is allowed to develop to the desired density. Development will be slow, but a fine negative, entirely free from halation, will result. To get the right exposure, I focus,

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MORNING MISTS
BY
JOHN W.
SCHULER

stop down as much as is necessary, and then, removing my head from underneath the focusing cloth, look directly at the strongest light for a minute. Returning my head beneath the focusing cloth, I count seconds until I can see all detail in the shadows. Half this time will give a good negative, but with somewhat undertimed shadows. The same time will give full-timed negatives, while double or treble the time will do no harm and will allow of the bromide treatment to prevent halation, as described above. The same method is also applicable to any class of subjects requiring more than two or three seconds' exposure. This is a suggestion I got from one of the annuals several years ago, and it has saved me many large plates and the loss of many good orders that I would otherwise have lost through under-timing.

Here is a formula for the best reducer it has ever been my good fortune to try. It was given out by a demonstrator at an Eastman school. He had a small bottle of sulphuric acid, C. P., and another containing a saturated

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solution of permanganate of potassium. Into an eight-ounce graduate of water he poured about two drams of the acid and about four drams of the permanganate solution. This was applied, by means of a wad of cotton, to the over-dense portions of the negatives, as they came out of the wash water. The work was done near a tap, under which the negatives were rinsed every few seconds to avoid staining. However, should stains make their appearance, a short immersion in a very weak solution of oxalic acid will remove them. This reducer does not destroy the delicate detail in the shadows, as the ordinary Farmer's reducer is apt to do.

The professional often has an opportunity of buying up developing paper that has gone stale and will give nothing but very flat and gray. If this paper is taken out of the envelopes and "baked" in a fairly warm oven, or dried before a fire, shielded from any strong light by a screen of postoffice paper, for a couple of hours, it will generally give perfect prints. By following this plan, I have been able to use to good advantage large quantities of very fine paper that cost me about one-fourth the regular price. I have used such paper that has been off the market for several years and paper that has been returned by various customers as entirely worthless. In extreme cases I have found it necessary to add very large quantities of bromide solution, enough to give greenish tones; but these prints were used for redeveloped sepias and seemed to give even better results than those obtainable on fresh papers.

A good deal of what passes for contrasty lighting in studio work is really the result of under-timing. If the reader will put a subject under his light and make an exposure under the conditions which he believes gives him a contrasty lighting, and then, without changing a screen or curtain, expose another plate, giving it four times the exposure, and develop the two together or in the same developer, I am quite sure that he will learn something to his advantage. A study of the two prints from the two negatives will set him to thinking that perhaps he has a bad habit of under-timing much of his work. It is an easy experiment to try, and one that nearly always results in a surprise to the one making it.

With the advent of the printing machines, there is an increased demand for long runs, particularly in post-card work, and negatives are subject to more or less wear and damage. While varnishing helps, I have recently been giving the preference to a hardening bath, made up as follows:

Alum	2 ounces
Tannic acid	1 dram
Water	16 ounces

After the negative is well washed and fixed, it is immersed for exactly four minutes in this solution, the dish being rocked all the time. If allowed to act longer, the film may buckle or blister at the edges. The solution can be used over and over until exhausted. The negative seems to darken a trifle, becomes more brilliant, the film tough and glass-like as to surface, and so hard that water may be spilled on the surface and wiped away without injury to the negative.

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The Wonderful Ruins Of Petra

By William Frederic Bade

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Mr. F. O. Baldwin, writing for the photographic department of the American Colony, Jerusalem, Palestine, sends greetings to CAMERA CRAFT, *and says: "It is a great boon to us far away lovers of photography and keeps us in touch with progress in our home land." He sends a collection of pictures, typical of the good work of this department of the American Colony Stores, these pictures being the result of a visit to Petra, about fifty miles south of the Dead Sea. As subjects for the camera, the scenes depicted are far from being hackneyed, the one showing the upper part of Khasneh Fir'aun being, it is believed, the first photograph of the kind to be made. Mr. Baldwin says: "We were compelled to climb an abrupt precipice to a height of over a hundred feet, manipulating the camera in a very precarious position to secure the long exposure required by the dark red color of the subject and the shade in which it was situated." For the excellent and authoritative descriptive matter we are indebted to Dr. Bade, head of the Department of Semitic Literature, Pacific Theological Seminary; a gentleman who is thoroughly familiar with the wonders of that interesting locality. We believe that the excellence and interest of both pictures and text matter will justify us in this departure from our usual rather strict adherence to practical photographic contents.*

This ancient city of North Arabia was situated along the great caravan highway between Damascus and Mecca. It was traversed also by the Roman road from Madeba to Akabah. The modern pilgrims' road from Damascus to Mecca still passes close to it. In Old Testament times the city was known as Sela, which means "rock," and hence the name was later translated into the Greek word Petra. During the ninth century B. C., the city fell into the hands of the Judean king Amaziah. During the third century B. C., it was conquered by the Nabatæans, who probably were responsible for most of the architecture whose ruins are now found there. The city was a natural stronghold, situated in a narrow, rocky valley overhung by high mountains. Its main portion occupied an irregular basin about half a mile square. Travelers coming from Jerusalem usually approach the ruins from the east, passing down a narrow defile between lofty mountain walls. The defile is more than a mile long and in places not more than twelve feet wide. This remarkable gorge is called es-Sik, and through it flows the brook Wady Musa, which rises in the so-called Fountain of Moses.

In the sandstone walls of the gorge are the remains of numerous cave-tombs. Directly facing the mouth of the gorge, where it emerges in an oblong basin between lofty cliffs, stands the beautiful El-Khazneh, hewn out of the rose-colored limestone of the mountain wall. The Arabs call it Khazneh Fir'aun (Pharaoh's Palace) and pretend that it was the residence of a prince. It was, however, a sepulcher, and great must have been the opulence of a city which could dedicate such a tomb.

The traveler Burckhardt described his first view of El-Khazneh as follows: "After proceeding for twenty-five minutes between the rocks, we came to a place where the passage opens, and where the bed of another stream coming from the south joins the Sik. On one side of the perpendicular rock, directly

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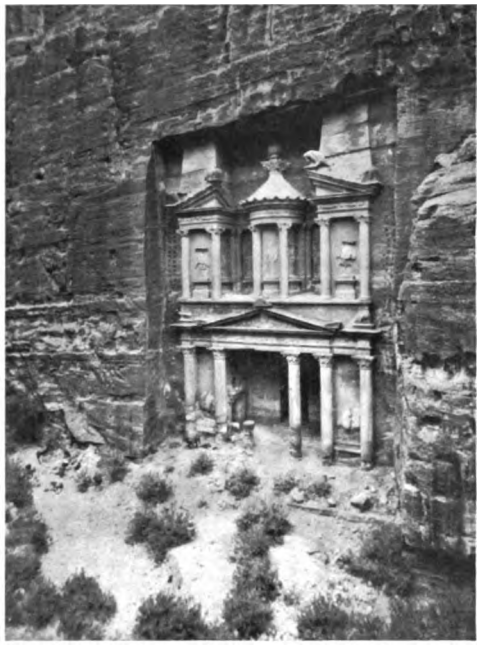

"THE BEAUTIFUL EL-KHAZNEH"

"ARCHITECTURAL DETAIL OF UPPER STORY"

opposite to the issue of the main valley, an excavated mausoleum came in view, the situation and beauty of which are calculated to make an extraordinary impression upon the traveler, after having traversed for nearly half an hour such a gloomy and almost subterranean passage as I have described. It is one of the most elegant remains of antiquity existing in Syria; its state of preservation resembles that of a building recently finished, and on a closer examination I found it the work of immense labor. . . . The principal

"THE NORTHWEST RIM OF THE VALLEY"

"AN ANCIENT PLACE OF SACRIFICE"

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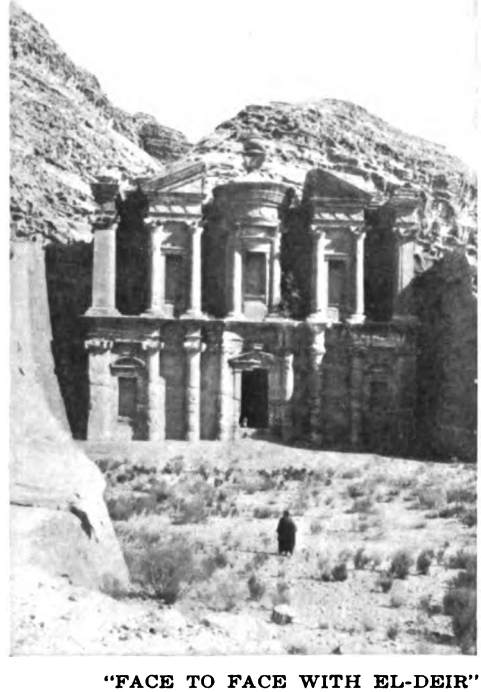
part is a chamber sixteen paces square, and about twenty-five feet high. There is not the smallest ornament on the walls, which are quite smooth, as well as the roof, but the outside of the entrance door is richly embellished with architectural decorations. Several broad steps lead up to the entrance, and in front of all is a colonnade of four columns, standing between two pilasters. On each of the three sides of the great chamber is an apartment for the reception of the dead. A similar excavation, but larger, opens into each end of the vestibule. . . . The doors of the two apartments opening into the vestibule are covered with carvings richer and more beautiful than those on the door of the

"PAUSING MIDWAY IN THE ASCENT"



"FACE TO FACE WITH EL-DEIR"

principal chamber. The colonnade is about thirty-five feet high, and the columns are about three feet in diameter, with Corinthian capitals."

The Bedouins, it is said, believe that Pharaoh's treasure was placed in the urn on the summit of the edifice and have vainly tried to break the urn by shooting at it. The architectural details of the upper story as shown in the accompanying photograph appear to be remnants of what were originally eagles. The legs are plainly outlined on the magnified front corner.

Passing on into the main basin, which was the original site of the city, we turn sharply to the left and mount by the remnants of a staircase, hewn into the living rock, to the summit of what is known as the Obelisk Mountain. Here are the remains of an ancient place of sacrifice, in the form of a sunken court, forty-seven feet long and twenty-four feet wide. Near the center of the court is an undetached slab of rock, slightly elevated, which probably was used as an altar. The lines of the court run exactly north and south. There

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can be no doubt that this is an example of an ancient Semitic highplace with its triclinium, and steps leading up to it, seen on the right. The sunken area probably was intended for occupancy by the worshipers, while the sacrificial act was performed on the altar.

Looking northwestward from this ancient highplace, across the basin of the main valley, one sees the rocky mountains of the northwestern rim of the valley. The cleft between the two summits on the right of the picture marks the ascent to the famous temple, known among the Arabs as El-Deir ("The Convent"). It is approached by a difficult ascent, consisting partly of flights of stairs hewn in the rock. Pausing midway in the ascent and looking back, one obtains a splendid view of the narrow gorge and in the distance a sectional glimpse of the Petra Valley, deeply set in its frame of protecting cliffs. On a small plateau near the top of the ridge, one suddenly comes face to face with El-Deir. The description of this temple is perhaps best given in the words of Roberts: "It is hewn out of the face of the rock, and is of greater magnitude than the Khazneh, being upwards of one hundred feet in height. The capitals of the columns and the cornices are in the rough block, the details never having been finished. In the interior, facing the entrance, is a recess with a platform ascended by two flights of steps, in the center of which once stood an altar. The place where it joined the wall is distinctly visible. Over it is painted a cross, showing that it has been used as a Christian church. This gigantic monument has been hewn out of a perpendicular cliff of rock and a broad esplanade cleared before it." There are more than eight hundred remains of monuments of one kind or another at Petra, but the El-Khazneh and El-Deir are the most beautiful.

SORTING SEEDS
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By ED. L. GRAYBILL

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STEREOSCOPIC DEPARTMENT

Stereoscopy Coming To The Fore

By Harry Gordon Wilson

Director Stereoscopic Division, I. P. A.

Of late years the art, for art it is, of making stereograms has come to the front very rapidly indeed. Two quite prominent photographic societies, both made up of enthusiastic workers, are interested in the advancement of this branch of photography. One is the United Stereoscopic Society of London, with branches in the English colonies, and the other is the International Photographic Association of this country, which has an active stereoscopic division, constantly circulating sets of stereograms over a route list made up of the names and addresses of the members contributing work for such use.

Stereogram negatives are made with a Stereo Kodak or camera, a camera fitted with twin lenses; that is, a pair of like lenses mounted a certain distance apart on the frontboard of the camera. The twin shutter opens and closes both lenses at the same time. The resultant negatives carry two similar images, one on each end of the plate or film. While the two images are similar in being both of the same view, they are not exactly alike, owing to the slightly dissimilar point of view of the two lenses, this difference agreeing with the difference between the views seen by the two eyes when viewing anything with the eyes alone. Negatives made in a stereoscopic camera are, of course, available for small single prints, bromide enlargements, and are just the right size for making lantern slides by contact, the most simple method. By removing the septum in the camera and substituting a single lens, the full size of the plate may be used for a single picture as with an ordinary camera. For that reason, the making of stereoscopic pictures can hardly be said to involve the use of special apparatus in the sense that the equipment has no use for ordinary photography.

It must be remembered that stereograms are not simply two prints made from one negative and mounted side by side, as some are inclined to think. However, certain negatives will give very good results, called "pseudo stereol," if prints therefrom are treated in this manner. One can also obtain true stereoscopic results by making two negatives with a small, single-lens camera, shifting it a little to one side between the two exposures. This, of course, means that the subject be one that is not moving. There is also a reflecting device on

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the market that permits of two stereoscopic "elements" being made at one time with one lens, and I understand that this has been recently perfected so that it is entirely satisfactory.

As I have said, a stereoscopic negative is made up of two smaller negatives on one plate, these two smaller negatives being called "elements." The one made by the right-hand lens shows a little more of the view on the left-hand side, and the one made by the left-hand lens shows a little more on the right-hand side. The two resultant prints are trimmed, transposed, and then mounted. In trimming, one should use care to see that the bases of both are the same, and both level, and to cut a trifle more off of the left side of the left element than off of the corresponding side of the right element; treating the right element in the same way by trimming a little more off its right side than off the right side of the left element. After proper trimming, the distance between two like points on some main object in the two elements should be not more than three inches. A greater distance means eye strain for the one who views the stereogram through the stereoscope.

As the plate or film receives the image in an inverted and transposed position, one must, in mounting the two elements, put them back into their original position by cutting them apart and transposing them in mounting. This is not the scientific explanation, but it will answer the purpose of helping us to retain the idea that the two prints must be transposed. If they are not, when viewed in the scope, the image of distant objects will appear to float before the near objects, and everything will have the appearance of being badly mixed up and jumbled together.

Stereoscopic work is not difficult, and is, as to results, very interesting and satisfying. It seems to me that the submitting of carefully made stereoscopic slides is the only right way in which we can show our friends at home the actual scenes that it has been our good fortune to visit during our vacation, or that we have seized and made our own, perhaps nearer home, at times when they were not present. Even the ordinary, every-day scenes that are available to all, may be made the means of giving great pleasure at a little later date; the stereoscopic picture being such a faithful record that one practically sees the view again in all its form, atmosphere, and perspective. In fact, stereoscopic photography should appeal to all who practice photography with a desire to get out of it all that it can offer.

Painting, or art generally, as such, with all its technicalities, difficulties, and particular ends, is nothing but a noble and expressive language, invaluable as the vehicle of thought, but by itself nothing. He who has learned what is commonly considered the whole art of painting, that is, the art of representing any natural object faithfully, has as yet only learned the language by which his thoughts are to be expressed. He has done just as much towards being that which we ought to respect as a great painter as a man who has learned to express himself grammatically and melodiously has towards being a great poet.—JOHN RUSKIN.

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

FLAT PRINTS: To prevent prints from curling when dry, they may be subjected to the same treatment that was once used with films. Immerse for five minutes in a bath made by adding one-fourth ounce of glycerine to sixteen ounces of water.—J. McK., Maine.

A REMEDY FOR BLISTERS: I have used the following method for a long time and with very good results in redeveloping. Add one drachm of formalin to eight ounces of bleaching solution of the Nepera formula. The effect of the formalin is in no way detrimental to the paper, and it hardens the print to such an extent that there is absolutely no chance of a print blistering during the remainder of the process.—A. L. H., Washington.

DEVELOPING IN COLD WEATHER: If one tries to do developing with the solutions around 50° Fahrenheit, the negatives are sure to suffer. I overcome the difficulty by placing the developing tray in another larger one, or a large dish, containing hot water. It is advisable to heat the developing tray first, by holding it inverted over a lamp or stove, taking care not to get it too hot, especially if it be rubber. Small pieces of wood placed in the bottom of the larger tray for the smaller one to rest upon will permit the hot water to act upon the bottom as well as the sides of the tray containing the solution.—Richard J. Russell, California.

NEAT WHITE BORDERS: Neat white borders can be given the dry, trimmed prints by using a small, flat file, costing about ten cents. The print should be placed face up on a sheet of glass, larger than the print, allowing the edge to protrude over the glass just a trifle, the file being held and used at an angle. Care must be taken to get the four borders uniform. After a few trials, it will be easy to file borders of varied widths on most any kind of paper. This method is very convenient when the prints are trimmed after washing, as they can be trimmed to preserve any desired portion, the border filed thereon.—Roy J. Sawyer Kentucky.

A THEORY: While I can offer nothing definite to sustain my theory, I am of the opinion that the so-called "chemical fog" that comes from forcing development by increasing the alkali, is due to some series of invisible rays having universal penetration powers. They do not manifest their action under ordi-

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nary development, the plate not being sensitive to them normally; but, given an over-dose of alkali it responds. This is particularly the case if ammonia or a caustic alkali be used. I believe that the use of two kinds of alkali combined to produce the desired amount of alkalinity is less conducive to the production of this form of fog than the use of one only. In other words, I believe there is a fog-producing point for each alkali and that this point of fog production for a combination is higher than in the case of a single alkali used alone.—Excel, Ohio.

A FOCUSING NEGATIVE IN ENLARGING: In the March last issue a writer recommended winding a clear glass with black thread and then coating with gelatine, in order to make a test negative for securing a sharp focus in enlarging. I have found it much more simple and convenient to draw lines directly on the clear glass, using a ruling pen and drawing ink. The lines can be drawn as fine as desired, and it takes but a few seconds to prepare a plate ready for use.—W. A. P., Michigan.

USING A TANK: In my extensive reading of photographic literature, I have noticed the great stress placed on the importance of using a double or reversible developing tank. I have used the single tank for some time and find that it gives satisfactory results in every instance. My developer is pyro, twenty minutes' time, and very seldom do I see any difference between one end and the other of the plate. One thing I do do, and that is to be sure to stir the developer well before pouring it into the tank. The only objection I can find to this developer is, after a new batch has been made up, for the first few times that it is used, it is liable to cause spots on the plate, due to using the solution before the chemicals have been properly dissolved.—T. P. Pettigrew, Illinois.

A TONING HELP: In some localities, particularly coal-mining districts, one has trouble from impure water being used to wash printing-out paper prints before toning. To overcome this difficulty, I have long used a process very similar to that recently published in *Photography and Focus.* The prints are printed quite dark, fixed out direct in the hypo, washed, and then passed through a formaline bath, one ounce of formaline to nine ounces of water. Out of this they are rinsed and then toned in the following bath:

Alum	38 grains
Citric acid	35 grains
Sulphocyanide of ammonia	315 grains
Water (hot)	30 ounces

Cool down to lukewarm and then add enough gold solution to make it tone in the usual toning time. If the bath is kept lukewarm, it will give rich purple tones. Finally wash well. By working in this way, one can avoid all the spots usually caused by impure water being used for the usual preliminary wash to remove the free silver before toning.—H. E. Blackburn, Pennsylvania.

LOADING HOLDERS: Cactus, Oregon, advises us in the February number to use a piece of red flannel around the lamp in a hotel room, to change plates

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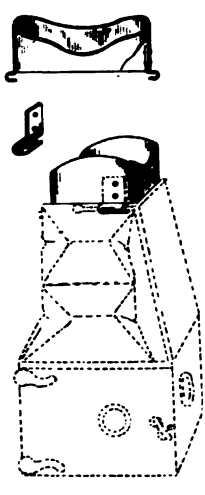
while making a tour or traveling. Let me add to his valued suggestion. One who has handled plates for a few years can go into the dark room and load and unload any number of holders without the necessity of any light. Any one can learn to do it by practicing a few times with some spoiled negatives and the eyes closed. I never use a light, even when one is available, and load my holders just as quickly as with one. So I would add, while making a tour just place everything within reach, extinguish the light, and perform the work. —T. P. Pettigrew, Illinois.



A HOOD ATTACHMENT: The hood of my reflecting camera, an Eastman Premograph No. 2, has no eye shield. The open top admits light that interferes somewhat with the getting of a sharp focus. To overcome this difficulty I devised the attachment shown in the sketch herewith. To make it I first cut a sheet of cardboard into the requisite form and covered it with black cloth. On each side I fastened strips of tin, bending the ends in such a way that they slipped over the braces that support the hood on each side, and these hold the attachment firmly to the frame of the hood. Of course, it must be removed when the camera is closed, but it can be made to fold up for convenience in carrying. The eye shield is a great convenience and is not at all difficult to construct. The little sketch herewith will make the whole thing quite clear.—Mrs. Ida F. King, Texas.

DIFFUSION IN PRINTING: If a slight amount of diffusion is desired in certain prints, it can be easily secured by interposing one or more sheets of ground celluloid between the negative and paper when printing, the number of sheets regulating the amount of diffusion. Usually, two sheets will be sufficient; in many cases where but slight diffusion is required, one will suffice. Care must be taken, in printing, not to move the printing frame when exposing the paper; as, if it be revolved during exposure, the diffusion will be too pronounced. The frame can be held a sufficient distance from the light so that the negative will print evenly without any need of turning the frame. The exposure must be increased when using the celluloid; experimenting with a strip of paper, before exposing a full sheet, will determine the time. I find this method superior to plain celluloid, as the ground effect adds materially to some subjects where breadth is desired. As far as I know, the Eastman Kodak Company is the only firm putting this material on the market in cut sizes. I have bought the 5x7 size for five cents a sheet.—Roy J. Sawyer, Kentucky.

BOTTLE LABELS ETCHED IN: The ordinary paper labels are easily soiled, defaced, or even destroyed or lost. The best method is to etch in the desired label, using wax and an etching fluid. Make one solution by mixing equal parts of sodium fluoride, potassium sulphate and water. The fluoride will not all dissolve, but that is immaterial. Make another solution, and you had best get your chemist to deliver it to you in a wax or lead bottle, composed of equal parts of zinc chloride, hydrochloric acid and water. Coat the place on

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the bottle where the inscription is to be made with a film of wax and engrave through the wax, using a sharp-pointed tool, the desired wording. Then mix equal parts of the two solutions and paint it on with a brush or swab. When it ceases to act, wash off and remove the wax. Hydrochloric acid attacks and destroys glazed ware, glass, and most metals, and it is therefore supplied by the wholesale chemists in wax bottles of various sizes, and these are somewhat more expensive than the glass kind. The plan I follow is to buy a small bottle, throw away two-thirds of its contents, and use it for the second solution by adding the two other ingredients.—C. L. F., New York.

AN EASY WAY TO WASH ROLL FILMS: In washing my films in the bathtub, I found that it took considerable time and trouble to keep them unrolled so that the water could come in contact with all parts of the surface. So I hit upon the following plan, which, while it may not be new to some, will undoubtedly be new to a great many, and save them a lot of time and trouble. The system is based upon the fact that hypo-charged water is heavier than water alone, and will sink to the bottom. I use some light strips of wood, the same length and width as the films; lay each film face up on a strip, stick a push pin in each end to hold it in place, fill the bathtub with water, and then float the films face downward thereon, going away and leaving them for an hour and a half or two hours. Returning, I remove the films from the strips of wood, give them a short rinse in fresh water to remove any hypo that may adhere to the backs, and then hang them up to dry. Plates can be washed in the same way by using blocks of wood and push pins.—G. E. Holmes, Wisconsin.

SOME DEVELOPING WRINKLES: Known over-exposure of a plate can be remedied in developing by first soaking it in a two per cent solution of tartrate of antimony and potassium, or what is called tartar emetic, for one or two minutes, then rinsing and proceeding with the development. A hydroquinone developer is recommended. The result will be more contrast and density than would be obtained in the ordinary way. Known under-exposure can be more or less overcome, according to its extent, by first soaking the plate, for from one to four minutes, in a solution made as follows:

Water	12 ounces
Carbonate of soda	200 grains
Carbonate of potassium	10 grains
Formosulphite	160 grains

If the plates, or the developer used, or both, are inclined to give fog, rinse plate before putting in developer. Otherwise, put immediately into developer, either tank or tray. In treating such plates, the endeavor should be to start out the detail and then let or make such detail keep the start, by increasing the alkali. If, after an hour, or hour and a half, in tray development, the detail is fully out, yet negative is thin, proceed as follows: Hold the plate as in flowing varnish and pour on some strong developer from the stock bottle. Pour on only enough to cover the emulsion with an even film of developer and watch the action closely. Allow this strong developer to act for from fifteen to forty-five sec-

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onds, according to circumstances, and then place back in the developer without draining off this strong solution. On the other hand, if the image seems to sink in and blacken too rapidly, drain the strong developer back into bottle, rinse off the plate, and if not sufficiently strong, place back in the dilute devel- of yellow prussiate, equal to the quantity of alkali employed, to the developer, of yellow prussiate, equal to two-thirds of the alkali employed, to the developer, will have a tendency to give density to the weak detail in the shadows, minimizing the too common soot and whitewash effects resulting from the use of strong and concentrated developers.—Excel, Ohio.

DEVELOPING UNDER-EXPOSURES: I like CAMERA CRAFT better than ever since the adoption of your plan of getting workers to write of their practical experiences in "Paragraphs Photographic." As my contribution to the new department I will tell how I develop under-exposures. The plan, in my hands, has proven more successful than the tank method. I have had much experience along this line, and have found that under-exposures do not require dilute development; and, in addition to better quality, one gains time by using a stronger solution.

Take the plate maker's pyro formula, normal, at 70 degrees, for one tray, and for the other, straight metol, that is, without hydroquinone, but, instead. more metol. Develop in the pyro until the lights are of ordinary strength for a soft negative, then rinse and develop for detail in the metol developer. It will not be necessary to force for density in the metol, because the pyro gives the body; thus one gets a clean, quick-printing negative, with the proper snap, all in a few moments. When the plate is placed in the metol, detail appears at a lively rate, seemingly not gaining density as fast as it does detail; although the metol developer does not degrade the highlights as would development with a dilute solution. I have tried out, in my work, some very fine formulas for securing special qualities, but I always feel safer with the plate maker's formula and offer it in preference to one of my own.—L. C. Bishop, Illinois.

MAKING POST CARDS: I am now using a developer that gives me fine results, and it only costs five cents for eight ounces—enough to develop from fifty to a hundred cards. It is made as follows:

Water	16 ounces
Hydroquinone	80 grains
Metol	24 grains
Argo soda	480 grains

It works slow, and yet, using it, I have finished cards at the rate of one every fifty-five seconds. I time my cards very carefully, and, in developing, as the image shows all over on the card, I take it out of the developer with a spring clothespin, kept for that purpose, and hold it until it builds up to a good depth, and then drop it, face down, into a dish of water to which has been added about a tablespoonful of acetic acid No. 8, or just enough so that the contents of the dish gives off an odor of the acid. This stops the development, and from it the cards are put into the fixing bath. Care must be taken to see that the fingers used to transfer the print from the acid bath to the fixing bath are not allowed to get in the developer.

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My fixing bath is prepared as follows: I put a pound of hypo into a clean bag such as table salt comes in and suspend it in a large, wide-mouthed bottle containing, if possible, sixty-four ounces of water. It dissolves rapidly, and any dirt in the hypo is caught in the bag. Then, in five ounces of water I dissolve one-half ounce of sulphite of soda, add two ounces of acetic acid No. 8, and lastly, dissolve one-half ounce of pulverized alum. When all are dissolved, I add this to the hypo solution, stirring rapidly while doing so. The whole is finally made up to seventy ounces, if there was not sixty-four ounces of water used in dissolving the hypo in the first instance. I use the glossy cards and squeegee them onto ferrotype plates. I used to have trouble with their sticking in warm weather, but now I give the cards a minute or two in an alum bath, made by dissolving a half-ounce of alum in a pint of water, and they dry and peel off nicely.—F. S., New York.

ADVICE TO THE BEGINNER: The best time to begin is late in the Winter or early in Spring. You work into things gradually and at the end of six or nine months you are more satisfied with your progress during that period than you would be were you to start in late in the Summer. Get a good book and study it carefully, and get one intended for the beginner. "The A B C of Photography" is excellent. Send for all the free manuals and booklets that you find advertised in the magazines; they contain a vast fund of information. And take at least one good photographic magazine, more if you can afford it Keep a record of every exposure made, a record showing what kind of a subject, date, time of day, condition of light, plate, stop, and length of exposure. Follow each such record with another covering the details concerning development. In connection with this last, read carefully "Watkin's Manual" until you understand thoroughly just what you are doing. At the end of a year you will understand exposure and development quite thoroughly, particularly if you study over and compare these records you have made.

When you buy a lens, as you will soon do after finding the limitations of the one that comes with your camera, buy as good a double lens as you can afford. Personally, I prefer a lens in a plain barrel, using it with a roller blind shutter that fits on the front board behind the lens. Then one can always use a smaller lens in the same shutter by having a supplementary flange to fit it and the larger flange on the front board. Stick to one brand of plates, and do not believe all you hear about pyro staining plates and fingers. Use good, fresh sulphite of soda in mixing it up, making a two-solution developer, and do not mix the two until ready to do your developing, and then only enough for the work in hand. All, or nearly all, the professionals use pyro, and there must be some good reason for their preference. Give good, full exposures, although not excessive ones, and then develop until the highlights of the picture come through on the back of the plate, using a moderately rapid brand. Remember to expose for the darker parts of your pictures. Buy your plates at the right price, and then do not be afraid of spoiling an occasional one. It is by your failures that you will learn the most. In developing, watch everything very closely, yet do not hold the plate up in front of the ruby light all the time. An occasional hasty examination as it is held for a moment in front of the light is sufficient.—Excel, Ohio.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, APRIL, 1911 No. 4

An I. P. A. Number

Heading the I. P. A. Department this month is a call from Chief Album Director J. H. Winchell for material for an issue of CAMERA CRAFT to contain pictures and articles from I. P. A. members only. The idea is an excellent one and we have given our consent to the October issue being given over entirely to the members, with the exception of the departments following the editorial heading. We want the members to take an active interest in this issue, which will be the October one, and have their pictures and articles in our hands not later than September first. This special issue will give the members a chance to show what they can do, and we will render all the assistance in our power. All articles will have our best care in editing to see that they are in the best of shape before going to the printer; all rough pencil sketches, and they are all we require where diagrams are needed to illustrate articles, will be redrawn in good style, and such pictures as we can use, either to illustrate articles or otherwise, will have the best attention of our engravers Send along the articles, paragraphs for the "Paragraphs Photographic" department, and pictures for illustrations. Mark them all plainly, "For the I. P. A. Number," and send them as early as possible. We may want to ask you concerning some change of wording or for a little different kind of print.

Shop Talk

These little monthly talks seem to have brought us much closer to our readers, and I trust they will continue to do so. Letters come, almost every day, from readers who comment upon this or that matter, mentioned herein; letters that we would not care to have had gone unwritten. But would it not be possible to go still further by having an "advisory board," and calling a meeting of its members once a month? Suppose we could make up a list of forty or fifty of our readers who would pledge themselves to write us a letter on a certain day each month; that is, attend the meeting regularly. You might ask: But what can I write about that will be well worth the while? That can be easily arranged; all that will be necessary will be for us to send out a letter each month calling attention to matters for discussion, such being confined to the one subject of making CAMERA CRAFT more valuable to its readers and extending its field of usefulness as far as possible. I will not hamper you with any ideas of my own concerning the getting together of such an "advisory board." If you feel enough interest in our magazine to be willing to assume the duty of attending a meeting (writing a letter) on a certain date each month,

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let me have your ideas as to the best plan for getting such an "advisory board" into working order.

Amateurs Will Advertise Pacific Coast

At this writing, our last issue being out but a few days, only a few of the earliest responses to our editorial, "Let Us All Help," in the March number, have come to hand. But these few have been so enthusiastic that we can feel quite sure of having a well-devised and comprehensive plan to announce in an early issue. In the meanwhile, we trust our readers on the Pacific Coast will give the matter their attention and write us as to what they believe will be the most advisable method of employing the photographic skill and loyal enthusiasm of our amateur photographers in advertising the attractiveness of this favored section. The coming Exposition will be an incentive to which we can add greatly by the circulation, intelligently and systematically, of post cards and lantern slides. The thousands of amateurs on the Pacific Coast have but to do a small individual share in order that this section may be advertised as no other has, even in this advertising age. Let us have your ideas on the subject, please.

A Monster Photograph

By H. Crosby Ferris

It isn't every day that a single photograph is produced at a cost of three hundred and fifty dollars, but that is what occurred at Denver, Colorado, recently. And this phenomenal example of photographic art wasn't turned out in a "post-card-while-you-wait" sort of manner, either. This prodigious photograph may be said to be in keeping with the altitudinous city of its conception—"a mile high!"—and is without doubt the largest photo extant.

The subject of the photograph in question is that noblest of animals, the horse. Incidentally, this enormous and high-priced photograph was executed to advertise the Livestock Exposition recently given in Denver, by the National Western Stock Show Association.

To a Denver photographic studio, the Mile High Photo Company, belongs the honor of having produced the largest photograph ever taken in the world, and the result achieved was obtained after more than a year's experimentation.

The perfected photograph, which is an enlargement sixteen times the size of the original negative, is seven feet high and nine feet in length, depicting Montgomery 2787, a beautiful Kentucky-bred saddle horse, owned by a leading Denver horseman.

The lens with which the original negative was made cost five hundred dollars, and the price of the enlarging lens used was one thousand dollars. The paper on which the picture is printed was manufactured especially for the work by a New York firm, and it required six months' time to produce one sheet of the necessary size. Before a successful negative was secured, three attempts at exposure were made, the thoroughbred equine posing before the camera three hours and a half on the final and deciding occasion.

As an achievement in photography, this posthumous piece of work easily takes first prize, while from an advertising point of view it was an unqualified success.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

CORRECTION OF LENSES FOR COLOR WORK AND ENLARGING

The *British Journal of Photography* recently published the subjoined remarks on this subject, which is reproduced for their practical value in color work. The statement concerning the use of enclosed arc lamps as illuminants in enlarging, namely, that the visible and focused image is made by the yellow, and the chemical or photographic image by the ultra-violet, must be received with some reserve. Ultra-violet rays are mostly cut out by glass lenses, and certainly apochromatic lenses are not in general use for enlarging purposes. And, notwithstanding the use of such lamps, such unshapeliness as would result from an inch variation in actual and observed focus is not the rule. The editor says:

"Of course, practically all lenses used on focusing cameras nowadays are achromatic. That is to say, the focal length for blue (or chemical) rays is the same as the focal length for yellow (or visual) rays. When a lens is used for three-color work this degree of color correction is insufficient and the lens must have absolutely the same focal length for the rays passed by each of the three-color filters. Lenses used for portraiture, copying, or enlarging, when an electric light of the enclosed arc type is employed, must be apochromatic, for the image is focused by the visual rays while the plate is affected by the ultra-violet rays rather than the blue. We have known cases where the easel of the enlarging apparatus has had to be shifted quite an inch to allow for the variation in focal length between the yellow and the ultra-violet.

The simplest way of testing a lens, and one quite accurate enough for everyday studio work, is to take a clean sharp line original and focus it sharply on the finest possible ground glass focusing screen by daylight. Then exclude the daylight, switch on the arc lamp, taking care, of course, that the original is well illuminated by it, and again examine the image. If it appears quite sharp, expose an ordinary plate, and, after developing, fixing, and washing, note if the image is perfectly crisp. If it is, the lens is, at all events, sufficiently apochromatic for everyday work.

For three-color work a little further test is necessary, and the color filters to be used should be at hand. The best may be made with either dry or wet filters, but, if dry, care should be taken that the filters are of first-class quality and a set. A set of filters purchased from a good firm will be of equal thickness, and if odd filters from various sets are used the thickness may vary. Variation in the thickness of the filter will slightly modify the focal length of the lens. If wet filters are employed the same cell may be used, the fluid being changed. The sharp line original may be used, or a fine wire may be stretched across the copying easel and focused upon. When this has been got quite sharp through one of the filters the second may be placed in position and then the third, and if the lens is apochromatic no variation in sharpness should be seen. Of course, we need scarcely say the focusing adjustment of the camera should not be touched, but should be locked firmly in position after the initial focusing has been done. If a more accurate test is desired, the parallax method may be used. A fine needle is fixed in front of the lens at a distance of about double the focal length. Another similar needle is fixed in about the position the ground glass would occupy were the first needle sharply focused. The axial ray must pass through both needles. The ground glass is removed entirely. If the needle in front is well illuminated, its aerial image may be seen, and the second needle is moved forwards or backwards until the No. 2 needle coincides with the aerial image of No. 1 needle. The eye is moved from side to side in order to discover this coincidence. If the No. 2 needle is behind the aerial image the fact may be detected by looking slightly from one side or the other, though it could not be detected were the eye in line with both

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needles. Having secured this coincidence with one filter in position the filters may be changed, and if the coincidence is permanent with all three filters the lens is apochromatic.

SPIRIT-VAPOR LAMPS FOR HOME PORTRAITURE

The following remarks by F. J. Mortimer in the *Amateur Photographer* are accompanied by illustrations that show qualities much closer akin to daylight illumination than anything I have seen by other artificial illuminants. The author says:

"The recent introduction of high-power spirit-vapor lamps for lantern projection and enlarging purposes has suggested the possibility of their use for portrait work. Comparatively, the light given by a spirit-vapor lamp, such as the 'Luna,' or the high-pressure 'Meta,' is about three times as great as that given by the average incandescent gas mantle. Two of these lamps, therefore, used in conjunction with plates of extreme speed and a large-aperture lens, render it possible to reduce exposures to a minimum.

"Further than this, the light given by one or two spirit-vapor lamps produces a softer result—one free from harsh contrasts, and with better modeling than would be the case with flashlight.

"Many workers would elect to produce portraits at home, but are debarred by the smallness of their rooms, or by the awkward direction in which daylight illuminates the most desirable places. Given a certain amount of patience and observation, there is no reason why good portrait work should not be accomplished in any room, big or little, with the aid of artificial light.

"On many previous occasions we have referred to the utility of flashlight for indoor portraiture, and undoubtedly this form of artificial lighting has many advantages.

"Spirit-vapor lamps, however, if properly used, will give even better results than flashlight, and are, moreover, entirely under control for the purposes of observing the final effect, and adjusting the modeling before the picture is taken. In this respect, work with the vapor lamps approximates to daylight studio photography. It is here that flashlight portraiture fails, as it is not possible to estimate exactly what the final effect will be, and one has to depend on past experience in arranging the position of the flash to the best advantage.

"In the small room there need be no special preparation for securing the portrait. The sitter can proceed with his or her usual occupation, and the photographer can with one or a couple of portable vapor lamps, placed in various positions, study the lighting, and then when ready for making the exposure pump the light up to its greatest power, and uncap the lens.

"The exposures for portraits with the spirit-vapor lamps are surprisingly short, provided quick plates are used and the lens is of large aperture.

"The lamps were placed as close as possible to the sitters, care being taken that the direct rays did not reach the lens. With some subjects, where the light is to some extent in front of the camera, this shading of the lens will need special care. A small cone of cardboard painted dead black inside, or, better still, covered with black velvet, answers the purpose. As the image will be focused upon the ground glass, it will be an easy matter to see that no corners of the picture are cut off. Pieces of white cardboard were placed behind each light. These not only helped reflect the light, but also acted as shields. It should be noted that the light must be at an angle of forty-five degrees to the position of the sitter, and used at full power.

"The plates were developed in a tank with rodinal one in sixty, and this method of development in dilute developer is recommended for all subjects of this character, for it must be remembered that while the shadows, especially the deepest shadows, are quite underexposed, the highlights are in many cases fully exposed. The result of applying a full-strength developer in the ordinary way would be to rapidly bring up to full opacity these well-exposed highlights, and the detail in the halftones and lighter shadows would not have made its appearance before all printable gradation in the highlights had been lost. The slow development with a weak solution actually brings out the weaker portions before excess of opacity is reached by the lights.

"The employment of these portable lamps, in conjunction with the use of the high-speed and fine-grain plates which are the outcome of modern research and manufacturing experience, and of the wide-aperture lens, opens up a new field for the amateur portraitist

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at home, and, provided instructions are followed and care taken in handling them, there is no danger."

THE NEW COLOR FILM

Germany has, in the past, done little in the matter of direct-color photography, but now comes forward with a celluloid film that, like the Lumière and other plates, consists of a combined screen and sensitive emulsion. The newcomer is manufactured by the Neue Photographische Gesellschaft, and the underlying screen has already been described in this department as the Krayn screen. Very full accounts of the film are given by Professor Valenta in the *Photographische Korrespondenz,* by P. Hanneke in the *Photographische Mitteilung,* and by M. H. Quentin in *La Photographie des Couleurs,* and from these sources I learn that the general qualities of the film are very like that of the plates. These workers speak well of the color correctness; and, while the exposure time is about the same as that of the Autochrome, according to one observer it is a little slower, while on the other hand, M. Quentin says that it passes more light, fourteen per cent as against ten per cent transmitted by the Autochrome. Unlike the plates, the image is not reversed to make the positive, but is fixed as a negative (which, of course, is complemental in color) and from this any number of positives can be printed on a special positive film. This has many advantages, but also not a few objections.

A VALUABLE VOLUME

The Third Annual Report of the State Entomologist of Indiana, like the two preceding volumes, is a mass of valuable information for the orchardist and apiculturist. The book contains over two hundred and fifty pages and a wealth of illustrations. Readers of our magazine do not need to be told that the illustrations are good, our contributor, Benjamin W. Douglass, being State Entomologist and responsible for the illustrations as well as the text. Indiana is certainly setting an example in the matter of assisting its residents to overcome the pests that, if unchecked, often do so much to discourage the production of fruit and honey in even the most favored parts of the country. Giving such a report as the one before us a distribution such as it merits, the resultant benefits could hardly be overestimated. While the book is hardly intended for promiscuous distribution, we feel quite sure that a courteous request, coupled with a statement that the writer is interested in the subject, will bring a copy to any of our readers really concerned. Address, State Entomologist, Indianapolis, Indiana.

THE YELLOW CAP FOR ENLARGING

It is curious that the position of the safety screen used when putting the bromide paper in position for enlarging has received little or no attention, in spite of the fact that the cap usually employed most obviously spoils the definition and renders it impossible to focus directly on to the bromide paper. If, however, we use a similar non-actinic screen behind the negative, instead of in front of the projector, all focusing difficulty will disappear, and it will become easy to adjust the focus with the bromide paper fixed up in position. So long as the yellow screen is behind the negative, it does not matter much where it is placed, provided it is quite transparent and also proof against heat. As a rule, it is easiest to insert it between negative and condenser, but even to enable this to be done most enlarging lanterns require a little alteration. If the maker takes the matter in hand he can arrange so that the screen can be placed practically anywhere, near the light being the ideal position, though in this place a gelatine screen will, of course, be of no use.—*British Journal of Photography.*

BROMIDES IN OIL

So far the bromoil process has made but little headway among professional photographers, but those who have practiced it will testify to the fact that oil pigments are not necessarily so messy in use as they are popularly supposed to be. This being so, it is surprising that they are not more used in finishing ordinary enlargements instead of crayon or water-color. The materials required are few and simple, comprising two or three good quality hog-hair tools, flat and round, about Nos. 5 to 8, a badger softener and a few sables for small details; a tube of lamp-black, one of megilp and a bottle of turpentine. Zinc white may be used if desired for touches on the highlights, but should not be used to form grays with the black. The method of working is totally different from that of painting in oils in monochrome where opaque color is used,

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since in the finishing process the success depends upon keeping the color as transparent as possible and applying it in such a way as to show no brush marks. This is done by mixing the black with megilp until it works, freely using strawboard or brown paper as a palette. Turpentine is used, as necessary, to thin the color for delicate shades. No preparation of the print is necessary, the gelatine surface being quite impermeable to the oil. The color is applied with the hog-hair brushes first upon the larger surfaces, using as little as possible and working lightly, more in the way that crayon is applied with a stump than in the manner in which painters usually work. The color can be evened up and brush marks removed by stippling with a clean brush just moist with turpentine, while very soft edges, vignettes, etc., can be finished with a badger softener if it be desired to remove every trace of texture. Fine details of hair, dress, etc., are done in the same way as in water-color finishing, using the small sable brushes, and when the black is practically dry, zinc white reduced with megilp may be used to strengthen the highlights. It is easy to lighten any portion which may appear too dark by stippling with a dry brush, or the color may be removed altogether with a piece of soft linen or wash-leather. There should be practically no gloss upon the work when finished, but this can easily be obtained if necessary by using more megilp with the color for the deeper shadows.—*British Journal of Photography.*

GROUND GLASS STUDIOS

A studio glazed with ground glass is an easy one for the inexperienced or inartistic operator to work in, but is not perhaps so well suited to the needs of the photographer who has a thorough grip of the various methods of lighting. There is always an initial amount of diffusion, and if the studio be a large one it is very difficult to get the strong painter-like effects which are now so much in favor. Another drawback is the loss of light which accompanies a very moderate amount of dirt upon the ground surface, which, by the way, is difficult to keep thoroughly clean. We were remarking upon this in a studio quite recently when the owner disagreed with us, saying that he had the surfaces washed regularly and there was practically no stoppage of light; but a day or two later one of the sheets was broken, and when the new one was placed in position it proved the truth of our contention. There are, however, circumstances under which the ground glass studio is actually quicker in working than a clear one; for example, in positions where much of the light is intercepted by buildings or fences the lighting is apt to be harsh, there being little general illumination, and what light there is being too concentrated for most subjects. Here the ground glass improves the general lighting as it catches light at angles which would otherwise be lost to the studio, and, moreover, softens it to such an extent that white blinds or other diffusers are rarely needed. From experiments we have made in an ordinary room we are inclined to think that white Muranese glass would in many cases replace ground glass with advantage. It is very pure in color and has a wonderful power of catching light at very oblique angles and transmitting it to the interior of the room; moreover, it seems to stop a direct beam of sunlight very effectively, and is besides an effectual means of screening off any overlooking from adjacent windows or walls.—*British Journal of Photography.*

PERSONAL EXPERIENCE WITH THE THAMES COLOR PLATE

The Thames plate has been fully described in these columns, but heretofore I have not had an opportunity of personally testing it. Recently I obtained a box of plates of the combined screen and emulsion type. The mode of development is identical with that of the well-known Lumiere color plate, except that hydroquinone and sodium hydrate is used for the developer and acid bichromate for the reversing solution. The plate is more thickly coated than the Lumiere and the film seemingly tougher, the mechanical manipulations are correspondingly easier. I exposed upon flowers, landscape and interior, and got good, clear pictures. Knowing that the color elements are much larger than the starch granules of the Lumiere screen, I had expected to see a greater coarseness in the image; but, on the contrary, the image was most homogeneous, transparent and well-defined. But, alas, here my praise must cease—the color rendering was most faulty. Taking a study of white and blue hyacinths, cream roses and variegated periwinkle with blue flowers, I exposed thereon a Thames and a

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Lumiere plate for the same time, six seconds, and developed them both by the formula recommended for the Thames plate. Notwithstanding that my Lumiere plate was a month over its guaranteed time, it yielded a perfect plate with all the colors faithfully reproduced. The Thames plate was clear and bright, but the colors were woefully out. The blues were over blue, the yellow roses pink, and the green leaves reddish. It gave me the idea of an imperfect color screen, permitting an excess of the short rays of the spectrum. At some future time I hope to try again with a different screen. The one used was enclosed in the package of plates, and is a light yellow celluloid film to be placed between the lens elements. Incidentally, it is worth noting that if, instead of reversing the plate after development, it is fixed in hypo, the resulting color negative gives excellent prints in black and white with very correct values and no granularity.—[H. D'A. P.]

DEVELOPING AUTOCHROMES

I stated in the last paragraph that I had used the formula of the Thames plate on the autochrome used for comparison. The result was so very satisfactory that I think that this procedure will be worth further trial. For the benefit of those caring to try, I subjoin the *modus operandi*. The developer is as follows:

No. 1:

Hydroquinone	½ ounce
Potass. metabisulphite	½ ounce
Potass. bromide	60 grains
Water	20 ounces

No. 2:

Caustic potass.	1 ounce
Water	20 ounces

Use equal quantities of 1 and 2.

Develop in equal parts of the two above for five minutes. Save the developer. Wash two minutes and immerse in the reverser, made up as follows:

Bichromate of potass. (10 per cent solution)	1 ounce
Water	10 ounces
Sulphuric acid	1 drachm

Wash five minutes, return the plate to the developer, permit it to develop in full daylight for three minutes, wash three minutes, and dry.—[H. D'A. P.]

PAPER PLASTER AND ITS USE

"Paper plaster is one of the most useful and durable mediums for decoration," says *Woman's Home Companion* for March. "It may be used on small or large surfaces, and even in unskilled hands charming results may be produced with it.

"Take old newspapers and tear them into very small pieces. Put a mass of them in a tub of water and allow them to soak over night. In the morning put the whole mass through the meat-chopper. Wet it again so as to make it pliable like plaster. Practice modeling the paper into different shapes while it is in this state, but remember, of course, that it will not be permanently cohesive. After you have learned to handle the pulp mix it with a little glue. It will remain soft for some days and can be molded without haste, but as time goes on, the molded plaster will become hard.

"Old glass bottles may be covered with the plaster and decorated in any way that you may fancy. Well-shaped jars may be decorated with designs of fruit or flowers. When the pulp dries, it takes on an attractive bronzy color without treatment of any sort. Soft brown or green dyes may be worked in with the plaster, however, and produce charming effects.

"Glove or handkerchief cases may be made from ordinary wooden boxes. For a handkerchief-case, cover a cigar box with the paper pulp, working in some simple and appropriate design, pinching it and modeling into shape. For this purpose use a narrow paper-knife and make the more delicate touches with the flattened end of an orange stick. Pad and line the inside of the box with silk.

"Very pretty bas-relief effects may be made with the plaster. It may even be used in executing low-relief wall designs for borders or friezes. If you wish a conventional design or figure, cut out as many patterns of the same design as you will need for the space to be covered. Paste these securely on the surface to be decorated and mold the pulp over them. Keeping the pulp neatly within the lines will insure accuracy and uniformity. When the design is modeled the pulp may be colored with water-colors dabbed on with a sponge or with a large, soft brush."

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

A LEAD LINED SINK

An enquiry reaches us from Maine as to the making of a lead lined sink. We can hardly do better than quote the following from *The Metal Worker*:

An acid-proof sink, eight inches deep, twenty-four inches wide, and thirty-six inches long, was recently put in the New York Public Library for the use of the photographer. A table with the shape of the sink made in the center was constructed of wood, and this had to be lined and covered, as well as the wall back of it, with sheet lead. The table was two feet five inches wide and seven feet three inches long. Several methods were suggested for doing the work, but the one adopted was to lay out a miniature pattern showing how the whole sink lining and table covering could be cut from one piece of lead. The sheet of lead needed for the work measured with careful allowance for beating in the coves in the bottom and turning up the sides and ends, was five and a half feet wide and nine feet long, and the pattern lay upon it as shown in Fig. 1.

Commencing at the left-hand end of the plan, as shown in Fig. 2 facing the sink, three and a half inches was allowed to cover the ridge and return under the top of the sink table for nailing fast, then twenty-four inches for the left end of the table, eight inches for the left side of the sink, thirty-six inches to go across the bottom, eight inches up the right side, twenty-four inches across the right end of the table, and three and a half inches to fit over the ridge and turn down under the woodwork and be nailed fast at the right end of the table. The length of the sheet ordered left only one inch for trimming, but there was more leeway in the width of the sheet. The width of the sheet allowed three inches for turning over and fastening at the top, ten and a half inches for the back, then eight inches down into the sink, twenty-four inches across the bottom, eight inches up the front, and six inches across the front of the table, including three inches for covering the ridge and returning under the woodwork to be nailed fast. The dimensions and shape of the pattern were checked up and found to be accurate before the sheet was cut. The sheet had to be cut at four places because the center portion, forming the lining of the sink, dropped away from its neighboring sheets, with an eight-inch side wall on all four sides. The lead had to be cut again at four places to bring the sides and end pieces covering the table so they could be formed up and fitted into the sink. There also had to be cut from each corner an elongated leaf or spear-shaped piece, so that the sheet lead could be worked into the corner over the cove in the bottom. When all the cutting had been done, the sheet was carefully folded and dropped into place, forming the sink, as shown in Fig. 1. The lead was then worked into the corners with a plug of soft pine wood and a sheet lead dresser, so that it would fit around and over the ridges and down into the depressions, as shown in Fig. 2.

When the lead was all carefully fitted into place it was fastened to the woodwork with tinned nails, and the sink then appeared as in Fig. 3. When the lead was securely fastened, the next step was to make the abutted seams which run from the cove in the corners of the sink from the bottom to the top. These were made by the lead-

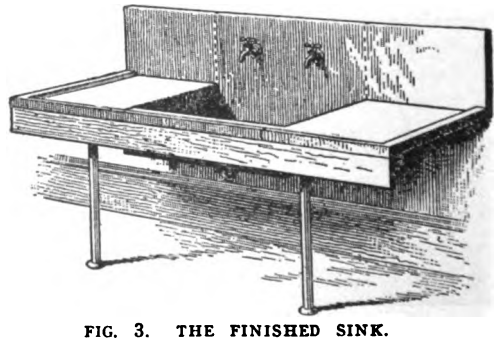

FIG. 3. THE FINISHED SINK.

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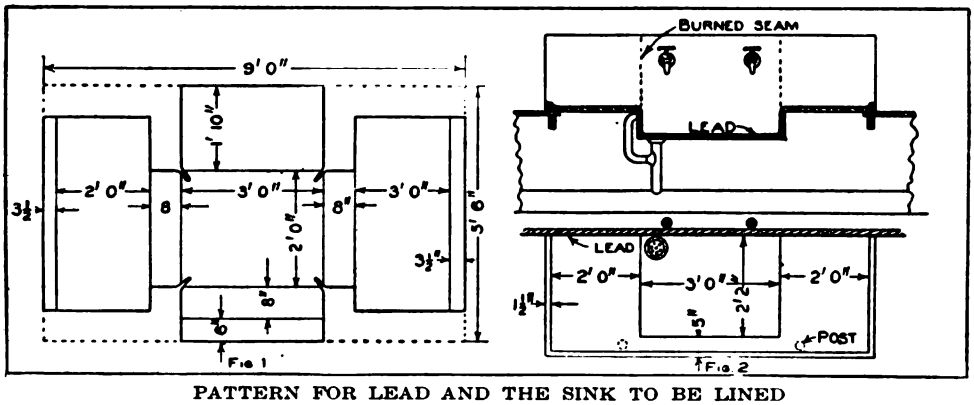

PATTERN FOR LEAD AND THE SINK TO BE LINED

burning process. The corners of the sink lining were grooved out, thoroughly cleaned and burned together, with the addition of a piece of clean sheet lead to give additional strength and thickness at the points marked by dotted lines in Fig. 3. Care was taken to burn all parts thoroughly and to have a considerable thickness of lead at the seams. This made it possible for the lead-burned seams to be shaved down and smoothed so that they were as invisible as if the lining were made entirely of one sheet of lead, or had been cast or beaten up from one piece complete. A two-inch cast lead trap received the waste from the sink and connected with a two and a half inch lead-lined iron pipe, all of the joints being made by the lead burner. The iron pipe was, therefore, on the outside to protect it from hard usage. This waste line was carried down to the basement along the ceiling and connected with the brick sewer in the street separately, without the use of an intercepting trap at the front wall. The upper part of this waste line was carried directly from a point above the sink through the roof and to a height of ten feet. In the basement where the turn from the vertical was made to the horizontal line, a long sweep bend was used. At the base of the vertical line there was a clean-out opening, so that in case of stoppage of any kind, an opening for clearing the pipe would be available. The use of a long sweep bend and a straight line through the roof permits the use of a flexible rod to be inserted for cleaning the pipe, if necessary.

ENCAUSTIC PASTE

Very few readers know how much a bromide print can be improved by waxing; that is, rubbing it well over with what is called encaustic paste. A good one can be made by melting an ounce of white wax in a sand or water bath, adding to it six drams of oil of lavender, and when thoroughly mixed, adding a drachm of gum elemi, continuing the stirring until the mixture is quite cold. It is applied by putting a small piece of the paste on the center of the print and, using a wad of cotton, with a circular motion, rubbing it in and about, continuing the rubbing until the wax seems to be all removed. Prints intended to be copied, but inclined to show grain, should be subjected to the same treatment.

ANOTHER SUBSTITUTE FOR THE GROUND GLASS

A reader in Ohio writes to tell how he made an emergency ground glass and one that is easier produced than those described in recent issues of this magazine. He takes a ball of fresh putty and dabs it all over the surface of the glass, turning it about constantly so that a moist portion is always being applied. The result is, even with the skill acquired by a little experimenting, rather coarse and opaque, but by gently rubbing with the palm of the hand, rubbing in a circular direction, the finest possible surface is obtained. An improvement is effected by making a second application after the first has been allowed to become perfectly hard, a process that requires a couple of weeks perhaps. When this last has also hardened, a coat of thin, clear varnish will serve as a protection against scratches. Our correspondent now takes a small ball of putty with him whenever on tour and always feels that he is perfectly independent of any accident that may happen to his focusing screen.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

OUR OWN "CAMERA CRAFT"

I have asked Mr. Clute if he would allow us to have one issue of CAMERA CRAFT all to ourselves if we would furnish the articles and pictures necessary to fill up the pages, and he has kindly consented to do so. In fact, he has offered to help in every way possible to make the idea a success. I want all the members to try their hand at an article, an illustrated one, if possible. I want the frontispiece and the other illustrations in that issue to be something up to the usual standard, if not better. Send all articles, paragraphs and pictures, direct to the office of CAMERA CRAFT, marking them "For the I. P. A. Number." And be sure and have them reach Mr. Clute's office before September first. If you can get them in earlier, so much the better. If I can help you in any way, if you wish any advice on the subject of what to send in, drop me a line, and I will be pleased to give you any assistance I can. Let us all get together and make this next October issue of CAMERA CRAFT the best number of the year. Then Mr. Clute will give us the same opportunity next year, and will find us better prepared as the result of our experience this time. Do not hold back and think there will be plenty of others who will see that the idea is carried out. If all hold back, nothing will be done. You are the one that is being asked. Write your article and send it in, together with the prints and pencil sketches that it may need for illustrations. You can at least write a few of those paragraphs for the new department started in the January issue. Send in one of your best pictures for a frontispiece, if accepted. At least, make a trial and send Mr. Clute the result. You will be surprised to find how easy it is to write a good instructive article on some photographic subject when you have a careful editor to go over it before it goes to the printer. The least you can do is to show that you are willing to try.

J. H. WINCHELL, Chief Album Director.

NEW MEMBERS

2759—Miss Palma H. Grahn, Maddock, N. D.
Class 2.

2760—H. J. Lewis, 700 Mentor Ave., Painesville, Ohio.
Class 2.

2761—Obert J. Hyland, Box 43, Hayfield, Minn.
8x10, 5x7, 4x5 and post cards, various papers, of landscapes, portraits, snow scenes and general views; for post cards only of landscape views, groups, etc. Class 1.

2762—Arthur W. Redfern, 190 Meadow St., Nangatuck, Conn.
5x7 and post cards, developing paper, of landscapes, general outdoor scenes and buildings, not groups; for the same. Class 1.

2763—J. H. Wilbourn, Box 464, Ballinger, Tex.
Class 3.

2764—Osbourne A. Walker, Ellsworth, Minn.
5x7 and 6½x8½, developing paper, of general scenes in S. W. Minnesota; for post cards of general interest from any portion of the world. Class 1.

2765—Loyd W. Prouty, 414 13th Avenue, N., Seattle, Wash.
Copy work and reproduction; for the same. Class 1.

2766—Fr. Polycarp, 805 So. Main St., Roswell, N. M.
3¼x5½, developing papers, of landscapes, buildings, etc.; for the same. Class 1.

2767—Rev. G. Haguri, Box 93, Guadalupe, Cal.
Class 3.

2768—Emmett L. Lovett, Roby, Tex.
2¼x3¼, 3½x3½ and 3¼x4¼, developing paper, of scenery and local views; for scenery and anything of interest. Class 1.

2769—C. W. Junkins, Lewisburg, Ohio.
5x7 and smaller, developing paper, of landscapes, prints or post cards; for the same. Class 1.

2770—Carl Swenson, R. F. D. No. 4, Volga, S. Dak.
Class 2.

2771—J. C. Warren, R. F. D. No. 3, Box 34, Hanford, Cal.
Class 2.

2772—E. Hoffman Pitcher, Madalin, N. Y.
All sizes, various papers, of portraits, views, literary, pictorial and historical work; for any subjects that treat on historical or prominent places. Class 1.

2773—John L. Maloney, Box 56, Missoula, Mont. Class 2.

2774—Eugene T. Lohman, Donner Ave., Monessen, Pa. Class 2.

2775—W. A. Drewebow, R. F. D. No. 5, New Hampton, Iowa.
4x5, various papers, of landscapes, scenes, hunting and farm life; for the same, post cards or prints. Class 1.

2776X—L. A. Sneary, 806 Carnegie Bldg., Pittsburg, Pa.
Post cards and up to 5x7. Prints or post cards. Class 1.

2777—F. H. Gill, Kay Moor, W. Va.
5x7 and smaller, developing paper, of landscapes; for the same. Class 1.

2778—Earl W. Arlin, Rockport, Wash.
3¼x5½, various papers, of scenery in the Cascades and studies; for views in general. Class 1.

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2779—W. A. Payne, 928 E. Ann, Ann Arbor, Mich.
Class 2.

2780—V. A. Ulrich, care Shaw & Borden Co., Spokane, Wash.
Class 3.

2781—John O. Snyder, Assistant Professor Zoology, Stanford University, Cal.
5x7 and smaller, developing paper, of stereoscopic views and lantern slides, Western U. S., Hawaii, Aleutian Islands and Japan. birds, reptiles, etc.; for stereoscopic views and lantern slides of birds, mammals, reptiles and fishes, landscapes illustrating the geology or botany of a region in America. Class 1.

2782—Francis P. Faulkner, Dexter, N. M.
3¼x4¼ or smaller, developing paper, of mountain scenery, views, cowboy or cowgirl pictures; for the same. Class 1.

2783—Miss Katherine McManness, 838 S. Main St. Findlay, Ohio.
Class 2.

2784—Willis Knippel, 7626 Eggleston Ave., Chicago, Ill.
4x5 prints or post cards, developing paper, of anything of general interest; for post cards of the same. Class 1.

2785—E. D. Johnson, 700 Morrell St., Detroit, Mich.
Class 2.

2786—Mrs. Franc Hagestead, Pronto, via Winnemucca, Nev.
Class 2.

2787—Dr. Collins Yerxa, Lawrenceville, Pa.
Post cards, 4x5 and 5x7, developing papers, of flashlights, portraits, buildings and outdoor views; for prints or post cards. Class 1.

2788—Walter L. Kuntz, Box 409, Eureka, Ill.
Post cards, developing paper, of farm scenes, etc.; for landscapes, views, etc. Class 1.

2789—U. Z. Gilmer, Roseville, Ill.
4x5 and 3¼x4¼, various papers, of landscapes and lantern slides; for post cards and lantern slides. Class 1.

2790—M. Andrus Locke, 26 Buffalo St., Castile, N. Y.
5x7 and post cards, various papers, of landscapes and views of Genesee River and State park; for river scenery, focal plane speed prints, and all kinds of water views. 5x7 prints and post cards. Class 1.

2791—Sterling Waterman, Warsaw, Ont., Canada.
3¼x5½ or smaller, developing paper, of portraits, flower studies and rural scenery; for portraits, mountain scenery and anything interesting. Class 1.

2792—Dr. J. R. Young, Box 515, Chico, Cal.
Class 2.

2793—Harry C. Bach, R. F. D. No. 2, Box 21, St. John, Wash.
3¼x4¼, 5x7 and enlargements, various papers, of general views of the West; for anything of interest, mostly post cards. Class 1.

2794—Herbert Cutler-Glasier, 221 Dudley, Boston (Roxbury), Mass.
Class 2.

2795—Harry A. Johnson, Box 515, Simcoe, Ont., Canada.
3¼x5½, developing paper, of general views; for unmounted prints of general subjects. Class 1

2796—W. W. Burson, 1412 W. State St., Rockford, Ill.
Class 2.

2797—L. R. Meredith, Box 21, Waynesboro, Tenn.
4x5 to 6½x8½, various papers, of scenery and other subjects; for scenery. Post cards only. Class 1.

2798—H. L. Wilber, Bolivar, N. Y.
Post cards. Class 1.

2799—Mrs. A. E. Grover, Lock Box 854, Geneva, Ohio.
Class 2.

2800—E. S. Haskell, care Bureau of Agriculture, Manila, P. I.
Class 2.

2801—L. O. Roden, Gorham, Kans.
Class 2.

2802—George Parke, 292 Madison Ave., Memphis, Tenn.
6½x8½ and post cards, various papers, of views of prominent buildings and attractive points, also unusual snapshots; for general subjects, but no lantern slides or stereoptican views. Class 1.

2803—W. H. Hawkins, 3300 Union Ave., Chicago, Ill.
Class 2.

2804X—Lemuel Barber, Box 495, Dysart, Iowa.
Post cards of river and landscape views; for river and mountain scenery; good work only in post cards. Class 1.

2805—R. Vintcent Solomon, Bronte House, 28 Faure St., Cape Town, South Africa.
3¼x4¼, developing paper and post card size, of representative African scenery, views, water-scenes, etc.; for photographs, no matter what size, of American and foreign sailing vessels (particularly French sailers), from members anywhere, especially those residing at San Francisco, Portland, Ore., Puget Sound ports, such as Seattle, Tacoma, Port Townsend, and also Victoria and Vancouver, B. C. Class 1.

2806—Alonzo Garber, 1804 S. Harrison Ave., Sedalia, Mo.
Class 2.

2807—J. A. Zimmerman, 7643 Woodland Ave., Swissvale, Pa.
Class 2.

2808—Olion Shauman, Greenville, Mich.
3¼x5½, developing paper, of scenery; for scenery, historical, marine, and street views, also anything of interest. Class 1.

2809—Lindley Eddy, Kaweah, Cal.
6½x8½, developing paper, of California missions, big trees, mountain views, and marine views; for the same. Post cards only; good work. Class 1.

2810—C. L. Fuller, 901 W. 3rd St., Sioux City, Iowa.
4x5, developing paper, of local scenery; for anything interesting. Class 1.

2811—H. C. Hattendorf, Burlington, Ill.
3¼x4¼, developing paper, of rural scenes; for anything interesting. Class 1.

2812—Mrs. W. E. Green, Meadville, Mo.
4x5 and post cards, various papers, of landscapes, children, city views, and farm scenes; for the same. Desire to exchange post cards and unmounted 4x5 prints. Class 1.

2813—W. F. Kruel, Union, Mo.
Class 2.

2814—C. Ekman, Box 1123, Centralia, Wash.
5x7, developing paper, of views; for the same. Class 1.

2815—Otto A. Jakonbek, Carrier Main P. O., Milwaukee, Wis.
Class 2.

2816—Leroy C. Ferry, Hillsdale, Ida.
4x5, various papers, of Illinois and Idaho landscapes, mountain scenes, and some general subjects; for views, and general subjects of interest. Class 1.

2817—J. A. Koon, Box 283, Bluefield, W. Va.
3¼x5½, developing papers, of views of all kinds and groups; for unmounted kodak pictures or post cards. Class 1.

2818—Donald R. Johnson, 21 Langford Park Place, St. Paul, Minn.
6x5, developing paper, of general views; for the same. Class 1.

2819—Rev. J. H. Williams, Redlands, Cal.
Lantern slides. Class 1.

2820—A. J. Hand, Photographer, Marion, Ohio.
Cabinet and post cards, various papers, of gallery work of all kinds and view work of all kinds; for anything, no matter what subjects. Class 1.

2821—Jules A. Bourquin, Horton, Kans.
Class 2.

2822—I. L. Roark, Roark, N. C.
3¼x4¼, and 4x5, developing and printing-out papers, of landscapes, mountain scenes, photos, etc., mounts or post cards; for views, portraits, scenery, or anything pretty. Class 1.

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2823—Karl Zimpfer, Walker, Iowa.
Class 2.

2824—Samuel W. Wenger, Box 62, Knob Noster, Mo.
Class 2.

2825—Byra Brooks, Box 134, Kersey, Colo.
Post cards. Class 1.

2826—John Tite, Box 182, North Cobalt, Ont., Canada.
5x7, developing paper, of landscapes, and general views; for the same. Class 1.

2827—J. Watson Thompson, Cambridge, Md.
3¼x5½, and 8x10, of landscapes, and portraits; for the same. Class 1.

2828—John J. Lee, Box 82, Ashtabula Harbor, Ohio.
Any size up to 8x10, developing papers, of docks, boats, machinery, lake, etc.; for anything. Class 1.

2829—E. R. Bolander, 116 S. 10th St., Richmond, Ind.
4x5, 5x7, and 6½x8½, developing paper, of local views and pictorial scenes; for landscapes, street scenes, marine, genre, stereo, and post cards. Prefer to exchange 4x5 and post cards. All work sent and received on approval. Class 1.

2830—Mrs. B. H. Sherman, Lock Box 66, Dexter, Iowa.
Class 2.

2831—Larrance Page, Greenville, Cal.
Class 2.

2832—Mervyn Harp, Jordan, Mont.
4¼x6½, developing and printing-out papers, of horses, landscapes, cowboy scenes, hunting, moonlight, and snow scenes; for general views. Class 1.

2833—Charles Roberson, Lake City, Minn.
3¼x5½, developing paper, of landscapes, rural scenes, outdoor life, and miscellaneous views; for prints or post cards of pictorial interest. Class 1.

2834—H. S. Warren, 8½ Grand Ave., Binghamton, N. Y.
Up to 8x10, developing paper, of landscapes, water scenes, and general views; for prints or post cards of anything of interest. Class 1.

2835—Frank M. Remster, 69 Myrtle, Bridgeton, N. J.
Class 2.

2836—Harry M. Clark, 5711 Huntington St., West Duluth, Minn.
Post cards, various papers, of miscellaneous views; for the same. Class 1.

2837—William H. Luebkeman, 1105 P St., Sacramento, Cal.
Class 2.

2838—Lindley M. Bowles, R. F. D. No. 1, Dallas, Ore.
2½x4¼, various papers, of landscapes, and animals; for landscapes, and views in cities. Post cards only. Class 1.

2839—J. H. Chinnery, Lock Box K, Scottville, Mich.
Class 2.

2840—E. Hodges, R. F. D. No. 1, Greenfield Center, N. Y.
3¼x5½, various papers, of historical points of war of 1776, landscapes, and views; for views, landscapes, or anything interesting. Post cards only. Class 1.

RENEWALS.

1337—Alfred C. Blake, Box 97, Searsport, Maine.
5x7 and smaller, developing paper, of pictorial views; for pictorial views and genre, also post cards. Class 1.

1391X—Louis R. Murray, 233 Ford St., Ogdensburg, N. Y.
Class 2.

1434—John Nelson, Box 34, Ericson, Neb.
Post cards. Class 1.

1437X—C. R. Tucker, Box 247, New Dorp, N. Y.
Class 2.

1788—Bertha Hopkins, R. F. D. No. 1, Holly, Colo.
Class 3.

1859—A. B. Stanley, Lone Rock, Ore.
Class 2.

1895X—Arthur L. Burgess, 879 E. Long St., Columbus, Ohio.
3¼x5½, various papers, of local views, college scenes, Ohio and Michigan scenery, lake views, and a wide range of subjects; would like some new foreign exchanges. Only good work desired. All work sent and received on approval. Class 1.

2009X—Dr. C. F. Meacham, Bellows Falls, Vt.
Post cards and up to 5x7, developing and printing-out papers, of historical and general views of this locality; for historical and general views. Post cards mostly. Class 1.

2049X—Mrs. Vercia Louck, Kalona, Iowa.
Post cards and 4x5, developing paper. Class 1.

2057X—James Dunlop, R. F. D. No. 33, Placerville, Cal.
Class 2.

2160—M. Rousselot, 11 rue Nationale, Evianles-Bains, France.
Class 2.

2274X—E. J. Towne, South Dayton, N. Y.
Post cards, of landscapes, farm scenes, brooks and street scenes; for anything of interest. Only good work accepted. Class 1.

2337X—Leonard A. Page, 156 Everett St., East Boston, Mass.
Post cards of Boston and suburbs views; for mountain scenery and city life. Only good work accepted. Class 1. Mr. Page may owe some exchanges; if so, kindly notify him, and he will gladly pay.

2380—R. R. Wilson, Box 77, Elmora, Pa.
Post cards. Class 1.

2395—C. A. Thomas, R. F. D. No. 1, Box 40, Lewis, Kans.
5x7 and post cards, of landscapes on farm and the like; for anything of general interest. Class 1.

2406—V. G. Heverly, P. O. Bldg., Center Point, Iowa.
2¼x3¼ to 5x7, post cards and prints, of landscapes, home portraits, genre, and other subjects of interest; for prints or cards of anything of interest. Class 1.

2435—John H. Diehl, 168 N. Clinton St., Chicago, Ill.
4x5, developing paper, of scenic subjects; for local scenery and general subjects of interest. Class 1.

2490—Fred J. Mitchell, Box 207, Port Stanley, Ont., Canada.
4x5 and smaller, developing paper, of lake shore scenery; for anything interesting, including copies of pictures. Class 2 to members in the United States. Class 1 to all others.

2673—Miss Lois Clency, Box 293, Escondido, Cal.
Class 2.

2688—Chas. C. Ferris, Box 693, Syracuse, N. Y.
3¼x5½, post cards, and unmounted stereo prints of landscapes, genre, etc.; for the same. Class 1.

2712X—E. D. Davison, R. F. D. No. 1, Munnsville, N. Y.
Post Cards. Class 1.

2757X—E. N. Sweitzer, U. S. S. "Yorktown," San Francisco, Cal.
Post cards. Class 1.

CHANGES OF ADDRESS.

1634—Chas. A. Koch, Antonito, Colo.
(Was Carbondale, Colo.)

1807X—C. J. Christenson, Armstrong, Iowa.
(Was Thor, Iowa.)

2611—B. G. Harbour, 226½ Peachtree, Atlanta, Ga.
(Was 34 Auburn Ave.)

2651—Ellen Thornburgh, 225 W. & W. Bldg., Perry, Iowa.
(Was Anthon, Iowa.)

2678—Ross C. Brown, 620 Stewart St., El Paso, Texas.
(Was Silver City, N. M.)

WITHDRAWALS.

2534—W. R. Frye, Malden, Wash.
Wishes to withdraw from Post Card Exchange.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

1911 KODAK ADVERTISING CONTEST

In their announcement of the new 1911 contest, the Eastman Kodak Company says: "From our standpoint the previous Kodak Advertising Contests have been a distinct and growing success. They have supplied us with pictures that told interestingly of the charm and simplicity of Kodakery. But there has been one drawback. In the professional division (Class A), the prizes have gone so often to the same people that we fear other photographers are likely to be discouraged. In order to remove this possible objection to our contests, these former winners will be barred from participation in Class A in the 1911 competition.

"While the barring of the former Class A winners from competition in that class widens the opportunity for other professionals—makes success more easily attainable—we still feel that for two reasons these former winners should also be entitled to compete for the prize money. First, because it is only fair to them, and second, because they have proved that they can make the kind of pictures that we want. The problem has been simply but expensively solved. Former Class A winners are barred from Class A, but may compete among themselves for the five hundred dollar cash prize in the Grand Prize Class. We hope to be repaid for this increase in the prize list by securing even better pictures than we have had before. No change is made in Class B, as the wide distribution of the prizes in that class from year to year seems to make such change unnecessary.

"First of all, these contests are not for the purpose of securing sample prints. They are for the purpose of securing illustrations to be used in our magazine advertising, for street-car cards, for booklet covers and the like. We prefer photographs to paintings, not only because they are more real, but also because it seems particularly fit that photographs should be used in preference to drawings in advertising the photographic business. The successful pictures are those that suggest the pleasures that are to be derived from the use of the Kodak, or the simplicity of the Kodak system of photography — pictures around which the advertising man can write a simple and convincing story. Of course the subject is an old one—therefore the more value in the picture that tells the old story in a new way. Originality, simplicity, interest, beauty —and with these good technique — are all qualities that appeal to the judges.

The terms governing are as follows:

"1. Each picture is to contain a figure or figures, and is to be suitable for use as an illustration in advertising the Kodak or Kodak system of amateur photography.

"2. Each print in the Grand Prize Class and Class 'A' must be from a negative 5x7 or larger. Each print in Class 'B' must be from a negative 4x5 or 3¼x5½ or larger.

"3. Prints only are to be sent for competition—not negatives.

"4. Prints must be mounted but not framed. (Mounts should show about one inch margin.)

"5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.)

"6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility of loss or damage.

"7. The negatives from which all prize winning prints are made are to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize money is made.

"8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising, as per the following form:

.....

For value received, I hereby consent that the pictures taken of me by..... ....., proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

.....

I hereby affirm that I am the..... (parent, guardian) of..... and for value received, I hereby consent that the pictures taken of..... (him, her) by..... proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

.....

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"9. All entries should be addressed to Eastman Kodak Company, Advertising Department, Rochester, New York. Entries from Canada should be sent to Canadian Kodak Company, Toronto, Canada.

"10. In sending pictures, mark the package plainly, "Kodak Advertising Contest," and in the lower left hand corner write your own name and address. Then write us a letter as follows:

I am sending you today by.....
(express, mail), charges prepaid.....
prints. Please enter in your Kodak Advertising Competition. Class.....
Yours truly,

Name .....

Address .....

"11. The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

"12. We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize winners.

"13. Only recognized professional photographers conducting a studio will be allowed to compete in Class 'A.' Class 'B' is open to all photographers not in above classification.

"14. This contest will close October 1st, 1911, at Rochester, New York, and September 20th at Toronto, Canada."

"The prizes are as follows:

"Grand Prize Class, open only to professional photographers who have won prizes in professional class in previous Kodak Advertising Contests. Negatives, 5x7 or larger. Prize, $500.00.

"Class A, professional photographers only. (Winners in 1907 and in Class A, 1908, 1909 and 1910, are not eligible.) Negatives, 5x7 or larger. First Prize, $500.00. Second Prize, $400.00. Third Prize, $250.00. Fourth Prize, $150.00. Fifth Prize, $100.00.

"Class B, amateurs only. Negatives, 4x5 or 3¼x5½ or larger. First Prize, $300.00. Second Prize, $150.00. Third Prize, $75.00. Fourth Prize, $50.00. Fifth Prize, $25.00.

"It should be remembered that these prizes are not offered for the sake of obtaining sample prints or negatives made with our goods. Merely pretty pictures, merely artistic pictures, will not be considered. The pictures must in some way connect up with the Kodak idea—must show the pleasure that is to be derived from picture taking, or the simplicity of the Kodak system, or suggest the excellence of Kodak goods. Must, in short, help to sell Kodak goods, by illustration of some one of the many points in their favor.

"The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak (or Brownie Camera) advertising.

"As reproductions of the pictures will often be in small sizes, too much detail should not be introduced.

"Pictures for reproduction should be snappy—vigorous, for they lose much by the halftone process.

"Where apparatus is introduced, it must be up to date. If you haven't the goods, you can borrow.

"It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases, special arrangements will be made.

"If you are interested, let us send you a copy of the Souvenir of 1910 contest, which gives an idea of the kinds of pictures that we consider valuable from an advertising standpoint.

"The jury of award will consist of photographers and of advertising men who are fully competent to pass upon the work submitted. Full attention will be paid, therefore, to the artistic and technical merit of the work as well as to its strength from an advertising standpoint. Announcement of the names of the judges will be made later."

"In last year's contest, ten prizes were awarded. In addition to these ten prize pictures, we purchased twenty-three of the less successful pictures for future use in our advertising. So it will be seen that in reality our prize money is even bigger than we advertise it to be.

"To our mind there is a big future for the camera in the illustrative field. There's a growing use of photographs in magazine and book illustrations, to say nothing of the rapid advance along the same lines in advertising work. There's a constant demand for pictures that are full of human interest. Such are the pictures that we need, that others need. The Kodak Advertising Contests offer an opportunity for your entry into this growing field of photographic work.

PHOTO-SECESSION EXHIBITION

An exhibition of water-colors by Cézanne was held at the gallery of the Photo-Secession, 291 Fifth Avenue (between Thirtieth and Thirty-first Streets), New York, opening on March first and closing March twenty-fifth. The gallery was open from ten a. m. until six p. m daily, Sundays excepted. This was the first opportunity given to the American public to see some of Cézanne's work in this country.

The next exhibition will be devoted to

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work of Picasso, of Paris, one of the most potent forces among the younger generation of painters in France.

A HANDSOME CATALOG

The new 1911 Graflex catalog is a beauty. A picture of the cover, minus the color, is shown herewith. By the time this reaches our readers it will be ready for distribution. If your dealer does not have one to hand you, write direct to Folmer & Schwing Division, Eastman Kodak Company, Rochester, New

York, and ask that a copy be mailed you. Do not miss it, because it contains much that is of interest to every photographer, particularly the one interested in high speed work. The illustrations in this new edition are most excellent examples of a difficult class of work, a class of work made less difficult by the Graflex cameras.

NOTES FROM THE BISSELL COLLEGES

Cullen F. Christ, of Washington, Illinois, student of 1909, was married last month to Miss Reich, of that city.

We note that one of our engraving students, Miss Josephine Steltenpohl, has recently joined the Engravers' Union at Louisville, Kentucky.

J. W. Orr, student of 1905, who has been engaged in the photograph business at Victoria, Illinois, has sold his place and returned to the College for a review course, preparatory to opening a studio in a larger city in the South.

We were pleasantly surprised last month by a visit from Will I. Beazell, student of 1906, who is following engraving work in St. Louis. We also had a pleasant visit from Paul Gault, student of 1908, who is located at Marengo, Illinois.

REPORTED BY WILLIAM WOLFF

H. S. Wallace, the popular representative of the California Card Company in Southern California, spent a few days in the city last month.

F. W. Smith, who moved his studio from Red Bluff to Visalia a few months ago, is doing a splendid business in the valley town. Mr. Smith makes all his work by flashlight, having installed an apparatus of his own devising.

Will Lussier is now with the J. B. James Studio in Bakersfield. His brother, Ollie, has taken charge of Mr. James' two studios in San Bernardino.

Henry M. Seron has purchased Taylor's Studio at Marysville, taking possession March sixth. Mr. Seron is a good photographer and will do a good business.

P. J. Thompson and wife, of Loyalton, have been taking quite an extended trip through the southern part of the State.

Someone must have felt aggrieved at the portrait of an old sweetheart in the display at the James Studio in Bakersfield, as a shot was fired through the six-foot plate-glass window recently. Mr. James had a window to pay for—the photograph came through uninjured.

CHANGE OF NAME

Attention is called to the advertisement of the Seavey Company (formerly the Chicago Photo Scenic Company) in this issue. There is no change in the personnel of the firm, in the artists employed, or in the quality of the productions. The well-known "Riverside" and "Edgewater" series of grounds will be known, hereafter, as the "Seavey Company" backgrounds, the adoption of this name being a protection to the purchaser as well as to the manufacturers. Look up the advertisement and send for a catalog. It will perhaps explain how some of your brother photographers are getting such rich and pleasing effects.

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A VALUABLE VOLUME

Any of our readers who are interested in the latest methods of teaching photography will do well to investigate the system used by Mr. South at the Keystone School of Photography. They have a handsome new catalog that will interest any one desiring ing to increase his knowledge of photography. Send for a copy before the matter is allowed to slip your mind. Address, The Keystone School of Photography, Box C, Downingtown, Pennsylvania.

ILLINOIS COLLEGE OF PHOTOGRAPHY

The College Camera Club foregathered at their rooms on the night of March third for one of their contests and receptions. A feature of the program was an exhibition of a set of amusing lantern slides, showing caricatures and photographs of students, and depicting many local hits. The prizes in the portrait contest were won by Miss Martin, Mr. Neville and Mr. Wagner, in the order named.

TO ENLARGE PLANT

Plans have been completed by the Defender Photo Supply Company to double the capacity of its plant in Argo Park. The power plant is to be enlarged. The requirements of the business have made it necessary to utilize the extreme capacity of the present plant. The growth of the business has now rendered it imperative that additional power be developed. Frank Wilmot, the company's founder, states that the increased power is needed, not only to take care of the growing demand for photographic papers, but also for a new factory which is to be built soon.

At present the product of the Defender Photo Supply Company in Rochester is confined to photographic papers and photographic chemicals. The company operates in Philadelphia an extensive plant for the manufacture of dry plates, and it is planned to bring this business to Rochester in the near future. The company owns an extensive property at Driving Park Avenue and Argo Park, and there is plenty of space, not only for the erection of a modern factory for the manufacture of dry plates, but also for other large additions to the business that may come in the future.—Rochester *Herald*.

DURATOL DEVELOPER

One of the new advertisements in this issue is that of Duratol, the clear working, rapid developer, being supplied to the market in this country by Schering & Glatz, 150 Maiden Lane, New York. It has no deleterious effect upon the skin—not even causing the hands to become stained, while it has all the good qualities of other coal tar developers. They wish to send a sample and descriptive booklet to each of our readers. Write and ask them to supply you, doing it at once before the matter slips your mind. If the developer is given a trial you will be pleased with the results.

SOME ZEISS LITERATURE

Write E. B. Meyrowitz, 124 East Twenty-third Street, New York, if you are interested in high grade photographic lenses, and ask him to send you catalog of the Carl Zeiss objectives. You will find it an interesting list of excellent lenses, lenses from the birthplace of the modern anastigmats, Jena, Germany; and lenses made by one of the leading firms in that country of fine lenses. While the catalogs are typically German, being printed in Leipzig, they are in English, and all prices are given in dollars and cents.

KODAK VELVET GREEN

Several of the local workers have brought to this office samples of their work made on the new Kodak velvet green paper, and judging from their enthusiasm, the new paper is certainly a most valuable addition to the line of good papers available to the worker with an appreciation of the value of discriminating in the matter of color, surface and quality. Some landscape views that are but ordinary productions when printed in black and white, take on an interest and charm that is quite surprising when printed on the new paper. We would advise all our readers to get some of it from their dealer and give it a trial.

THE "SILENT" STUDIO SHUTTER

This is the time of the year when it is advisable for the professional photographer to see that his apparatus is in good working order. It would be a good idea for many of them to look into the shutter question and fit their camera with a new, silent-working, sure-working shutter. Write for a circular of the "Silent" studio shutters made by the Conley Camera Company, Rochester, Minnesota. It is not an elaborate piece of printing, but it convincingly describes a most excellent apparatus.

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NOTES AND COMMENT

ANNOUNCEMENT

Burke & James beg to announce that on account of the great and expanding business of the company, the stockholders have deemed it wise to cause a reorganization to be made for the purpose of giving it a more satisfactory form and capital stock.

The Illinois corporation known as Burke & James, having an authorized capital stock of one hundred and fifty thousand dollars, has sold and transferred all of its assets, property and good will, to a Delaware corporation known as Burke & James, Incorporated, having a capital stock of one million dollars, divided into two hundred and fifty thousand dollars preferred stock, and seven hundred and fifty thousand dollars of common stock.

The new corporation has taken over all of the contracts and obligations of the old corporation, and instead of occupying the cramped and inadequate .quarters at 617 West Jackson Boulevard, is now moving into the modern and more commodious four-story building, covering over one hundred thousand square feet of floor space, especially erected for the purposes of its business at Nos. 240 to 252 Ontario Street, Chicago. It is confidently expected that the future development of the business will greatly exceed the satisfactory showing that has heretofore taken place.

On behalf of the new corporation and its management we hope for a continuance of the friendly and profitable business relations which have heretofore existed between you and the corporation of Burke & James.

Yours very respectfully,

BURKE & JAMES, Inc.

Chicago, Ill., March 1st, 1911.

MILTON BRADLEY BANQUET

The Fifth Annual Banquet of the Milton Bradley Company was held the evening of February fifteenth, in the large dining-room of the Highland Hotel, about one hundred of the officers and employees of the company being present. The early part of the evening was spent in doing justice to a good menu. George W. Tapley was unable to attend on account of being absent in the South, but his son, W. W. Tapley, conveyed his father's good wishes to the banqueters during the evening. Others present were Henry P. Norris, Assistant Treasurer; Robert N. Ingersoll, Secretary and Assistant Superintendent; A. L. Webber, Advertising Manager; C. C. Hastings, Superintendent; E. O. Clark, Manager of the Boston branch of the company, and H. M. Crist, Manager of the New York branch.

After the eating a varied program was carried out by talent discovered in the Milton Bradley plant by Mr. Webber, assisted by a few outside artists. There were vocal selections by James Ryan, banjo and guitar duets by Gatchell and Wakefield, "music and merry talk," by Freeman and Fisk, singing and dancing by Frederick Dillon, some catchy songs by "Mlle. Verena," and monologues by "Jack" Train. The banquet closed with a minstrel show put on by "Bradley's Standard-Color Minstrels." They afforded plenty of knocks, many of which were aimed at the officers of the company who were present.—Springfield *Republican*.

ST. LOUIS-HYATT NEW CATALOG.

There has just reached our desk a copy of the new "General Catalogue No. 19," issued by the St. Louis-Hyatt Photo Supply Company, 805 Washington Avenue, St. Louis, Missouri. Like its predecessors, it is a veritable encyclopedia of photographic information concerning material and equipment available. We are not quite sure that a charge is not made for so large and bulky a catalog, but it is worth risking writing for one. If your stationery shows you are a professional, and you mention this notice, we feel quite sure a copy will be sent. Possibly they will send one if you are only an amateur, and mention this notice. But if you can get one, do so. You will find it a book worth having.

NORTHERN PHOTO SUPPLY CO.

Owing to the continual increase in their business, the Northern Photo Supply Co. have found it necessary to considerably enlarge their quarters, and have now annexed the neighboring store. With this addition they will have a floor space of over five thousand square feet, fitted with all modern conveniences, and it will place them in a better position than ever to take care of their rapid growing business. Although the firm has been but a short time in business, it has already been obliged to enlarge its quarters on several occasions. Such success speaks volumes for the excellent goods and service given patrons.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. These of positions wanted inserted free. No business advertisements will be accepted.

FOR SALE Gallery outfit and business in fine town, 94 miles from San Francisco. Best climate and water; population 3,000 and increasing. A good man can make good here. My health demands more outdoor life. Write soon. Address Box 575, Hollister, Cal.

FOR SALE Only studio in growing town of 2,000. Furnished for light housekeeping. Must sell as I have other interests in the north. Address Art Studio, Azusa, Cal.

FOR SALE Photo Studio in San Jose; also fitted for commercial work. Good location. For further particulars address E. B. S., 31 Angerais Bldg., San Jose, Cal.

FOR SALE the leading studio in a progressive western city of 12,000 population. Studio new and up to date; reception room furnished in solid oak, mission finish; operating room 40 feet square, north light and new Aristo lamp, 8x10 portrait outfit, 8x10 view outfit and 5x7 view outfit. All rooms of studio steam heated. Rent $30.00 per month. Studio enjoys the confidence and patronage of the leading people in the city. An A1 business proposition for a good workman. Price $1500.00. Refer by permission to Fayette J. Clute, Editor of "Camera Craft". Address W. G. Emery, Vancouver, Wash.

FOR SALE San Francisco studio, good location, fully equipped and doing a good business. Must sacrifice. Good reason for selling. Address S. L., care "Camera Craft," San Francisco, Cal.

FOR SALE The only studio (ground floor) in Goldfield, Nevada, doing a business of about $4,000.00 per annum, fitted out completely up to 8x10 work, located in the heart of the city. Cabinets $5.00 to $15.00 per dozen. Owner has mining interests which require his entire attention. Rent $25.00 per month including living quarters; license $12.50 per quarter; electric light and water; framing outfit and moulding stock also included. A good proposition for a live man, at the bargain price of $600.00 cash, no payments considered. Will invoice for $1,500.00. Population of Goldfield, 5,000. The greatest gold mining camp in the west; monthly payroll $200,000.00. Climate excellent; living expenses reasonable. If you want a snap communicate with Weyle Art Shop, Box 487, Goldfield, Nevada.

FOR SALE Studio; finest residence studio in Los Angeles, ground floor bungalow, large north light, fully equipped up to 8x10, completely furnished, prices $6.00 up per dozen. Fine family trade, ground rent $20.00, three years' lease, owner not a photographer. Price complete $1,500.00. Duplicates pay rent. Might consider partnership from some good live man. Price includes building and 4,000 negatives. E. G. Forrest, West Lake Park, Los Angeles, Cal.

WANTED 3A Special Kodak, fitted with Goerz, Zeiss or Cooke lens. Write, giving price. C. B. care "Camera Craft", San Francisco, Cal.

WANTED June 1st, view man to travel, headquarters Nebraska. Men wanted for Nebraska territory. Only first-class workmen and hustlers wanted. Address Printer, 414 13th Ave., North Seattle, Wash.

FOR SALE Circuit Outfit No. 8, equipped with B. & L. Zeiss Protar VII No. 12 Lens, as listed in Century Catalogue at $283.00. This camera has been used less than a dozen times and is as good as the day it was shipped. We will sell this outfit complete, including six eight-foot films, for $195.00. Gibson Kodak Store, 24 W. Forsyth St., Jacksonville, Fla.

FOR SALE First-class studio, two entrances on the two main streets; best location in town. Lease holds until after the fair. Address Shaw & Shaw, 1115 Broadway, Oakland, Cal.

FOR SALE Studio in a progressive Western city of about 15,000 population, with many small towns within a few miles to draw from. Operating room 20x30, single slant metal skylight, large reception room, dark room and work rooms; one of the best studios in the city. Five years' lease; rent only $14.00. Equipped with everything needed in a first-class studio for work up to 8x10. Located right in the heart of the city on main street, doing business right along. A good opening for a first-class man. Studio is well advertised and enjoying the confidence of the public. Act quick if you want to get the best chance of your life. For further particulars address Unique Studio, West 2nd St., Pomona, Cal.

FOR SALE Filmplate Premo, 3¼x5½, Planatograph lens, B. & L. Automatic shutter, film pack adapter, six Premo plate holders, Premo film pack tank, brass developing tank, 14 plates, specially made. Outfit used a year. Bargain. A. L. Burgess, 879 E. Long St. Columbus Ohio

FOR SALE A No. 5 Voigtlander Euryscope portrait lens, 16x20, in perfect condition, $50.00. Also a Cooper-Hewitt photo-engraving lamp, two tubes with stand and wire, $30.00. The Albertype Co., 250 Adams St., Brooklyn, N. Y.

WANTED To buy a pair of condenser lenses, nine-inch diameter, and an enlarging lantern to take 5x7 negative; also B. & L. wide angle, medium, 5x7 lens; all second hand. Address F. Gargiulo, 754 Montgomery Ave., San Francisco, Cal.

FOR SALE A 3A F. P. Kodak and carrying case, first-class condition. $15.00 will buy it. Address Lewis F. Tuttle, Anthony, Kansas.

POSITION WANTED By receptionist; can also retouch a little. Lady has had several years' experience. Address O. C., care "Camera Craft," San Francisco, Cal.

FOR SALE A 24x30 one-story frame building; east front, north light, corner lot 50x150 ft., in center of business section, town of 700; fine farming community; $1500.00 takes it; $750.00 cash, balance on easy terms. Address Hebron State Bank, Hebron, N. Dak.

FOR SALE Best paying ground floor studio in State of South Dakota, 30x110; living rooms above studio; no competition; equipments the very best, nearly all new. Large stock of picture frames. Reason for selling, other business. This is your bargain at $800.00; part cash, balance on installments if necessary. Do not miss this. Address D. C. Shoberg, Avon, S. Dak.

FOR SALE Fine, well located busy studios in good city, all money-makers. If you want money-making studios write us at once. Reason for selling, going on land in Mexico. Address D. J. Martel, Sioux City, Ia., 405 Fourth St.

FOR SALE or rent, cheap. A studio in good town, fully equipped. Doing a nice business and will sell or rent reasonable. Address Bert Naylor, Bertha, Minn., Box 214.

FOR SALE Studio in good Iowa town of 30,000, doing a fine business. Have other business and must sell quick. Fitted to 11x14. Good prices. Three other studios in town. Cash or monthly payments to suit purchaser. Everything up-to-date. Address J. B. Watson, Cedar Rapids, Iowa.

$350.00 Buys good photo business and outfit in Northern Iowa town; rent of studio $5.00 per month. For particulars address H. C. Johnson, Swea City, Ia.

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Prints of perfect quality and beautiful surface in purple or Sepia tone are easily produced on

Aristo Gold Paper

No toning chemicals required—just print, wash, fix.

American Aristotype Division,
EASTMAN KODAK CO.
JAMESTOWN, N. Y.

All dealers.

Please Mention Camera Craft when Corresponding with Advertisers.

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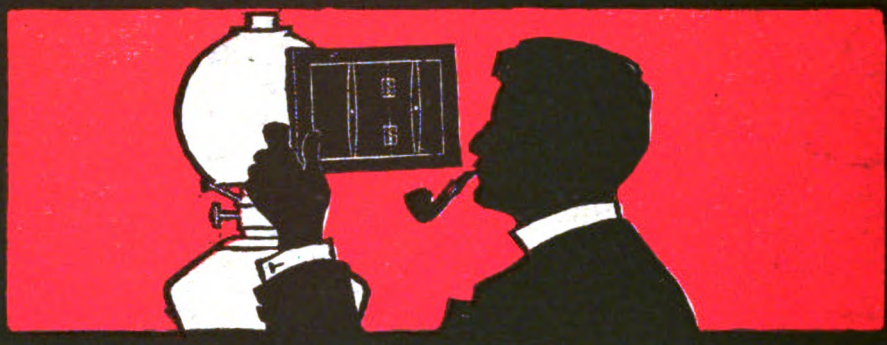

To bring out the best in every negative in black or sepia tone use

VELOX

A variety of weights and surfaces to select from. The "Velox Book," which is free at all dealers or from us by mail, explains. Get a copy and become a Velox expert.

Nepera Division,
EASTMAN KODAK CO.
ROCHESTER, N. Y.

All Dealers.

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Vol. XVIII No. 5 MAY, 1911 Price,

Camera Craft

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SAN FRANCISCO, CALIFORNIA

GET NEXT TO THIS:

CYKO paper has for a long time been used by photo finishers to produce the best results from amateur negatives which are left with the dealers to be printed, and now the Trust says in effect to the dealer: "You must not give the best chance to your customers' negatives---you must force the photo finisher to use our papers." This is important to you, Mr. Amateur.

This is a sample of the many letters received by the manufacturers of CYKO paper:

"For over five years we have been in the commercial photo business and during that time we have used nothing but CYKO paper and Hammer plates. We also do a large amount of amateur finishing in the summer, deriving our work from over forty different drug stores, some of them selling Eastman supplies.

"We always have done finishing of prints on CYKO paper but some of our customers (Eastman dealers) have told us recently that the Eastman Company has a man on the rounds trying to compel their agencies to have their amateur finishing done only on their papers. We have been unable to turn out work satisfactory to our customers except on CYKO paper."

Insist on CYKO prints if you wish the best results from your negatives. Do not allow yourself to be imposed upon.

ANSCO COMPANY

BINGHAMTON, N. Y.

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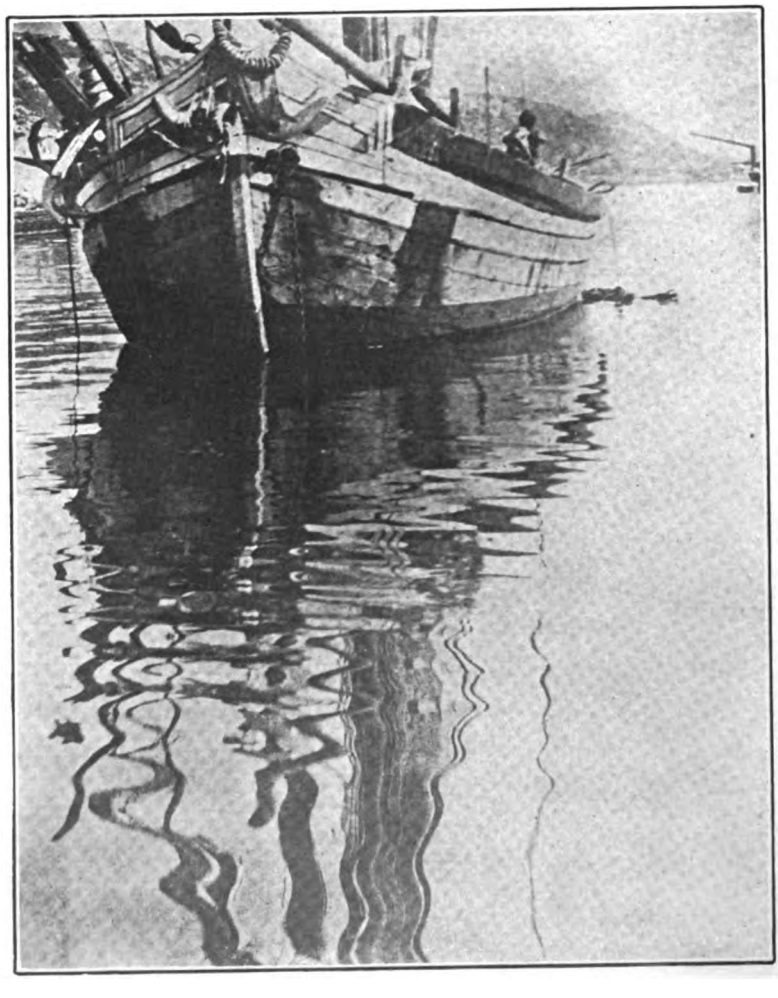

REFLECTIONS
By WILLIAM H. PHILLIPS

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII MAY, 1911 No. 5

Through College With a Camera

By Ben J. Nasif

With Illustrations by the Author

A COLLEGE PORTRAIT

SEVERAL recent writers in CAMERA CRAFT have begun their articles by blaming the editor for the fact of their stories being written when they considered that neither were they able to produce anything worth publishing nor was their subject of enough interest to make a presentable article. I will have to make the same complaint. Mr. Clute has insisted that he wants the experiences of the every-day worker, which he considers are of the most use to his readers; and as to the literary side, he will attend to that. So, at his request, I have written the following account of how photography has helped me to pay my college expenses, although I am sure that there are many students making the same use of it as I have.

In these days, most colleges welcome the self-supporting student and,

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if he is willing to work, will furnish him with occupation by which he may earn a greater or smaller part of his expenses. But should a young man have a good knowledge of some particular line of trade, such as photography, he can almost invariably put it to use and by it save himself a much greater amount of poorly paid work. Of course, it may have to take second place to some other occupation until the student is settled and acquainted with his surroundings, and the degree to which the business may develop later will depend upon his own ability and the circumstances and conditions of the particular college in which he proposes to work.

Perhaps the greatest question which confronts the student starting a business of his own is that of time; since, when a good opening for money making is developed, the temptation to take time for work which really belongs to one's lessons is great. This, I think, is the reason why many self-supporting students prefer to assume only a stipulated amount of employment for the college, rather than start an independent business of their own, thinking that by so doing they will have more time to devote to studies and college life. But should the little business grow to proportions too large for one to manage, outside help, in accordance with the needs, can always be employed; and, in this way, no extra time will be lost and the profits will be proportionately larger.

Conditions favoring the starting of a small photographic business are alike in no two places, and care should be taken in selecting the college in which one proposes to begin. In the college where I started, the conditions were particularly favorable. It is in a small city of about one hundred and fifty thousand inhabitants, and the college campus is located some twenty minutes out of town.

I had no small amount of trouble in finding a suitable place in which to work, as, in the interests of the business, it is most necessary to have one's little establishment right on the campus. However, after inquiring, I learned that there was a large empty room in the college observatory which was not being used. I made application for this, and it was placed at my disposal in return for a certain amount of the observatory developing each week. Business began with the developing and printing of teachers' and students' films. At the start, I was able to purchase only dishes, printing frames, ruby lantern, and the most necessary equipment.

When it became known that there was a photographer in the college, work began to come in; of course, slowly at first, but gradually increasing. I charged less than the photographers in town, and made it a point of always doing the work as well as I possibly could. Once started, business increased fairly rapidly, and I was soon able to purchase a small camera. With this I made a series of negatives of views about the college, and, after arranging with the treasurer, had prints from them placed on sale at the college athletic store. To this collection I added, from time to time, photographs of anything new or interesting which took place.

This series was first started with only the idea of filling in spare time, but it quickly grew to be one of the most important branches of the business. At present, I always have my post-card Kodak handy, and, should anything inter-

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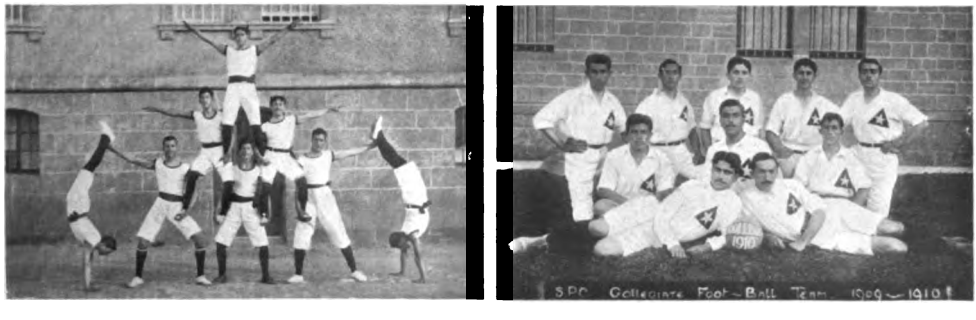
A CORNER OF THE CAMPUS

esting take place, some distinguished guest pay a visit or some entertainment be given, a number of plates are exposed and post cards made up as soon as possible. These are placed in the store and samples exhibited on the college bulletin board. It is needless to say that the series contains photographs of every athletic team in the college. Shortly after the collection was started, the gymnastic team of the athletic association, the pride of the college, announced an exhibition of pyramid building, and much interest and expectation were manifested by the students. The gymnastic director kindly consented to give me a "sitting" a couple of days before the exhibition. This time, over a dozen pictures were taken, and several hundred post cards immediately made up. They were on sale at the store the day following the exhibition, and samples on the bulletin board informed the students of the fact. A couple of these are reproduced herewith. Of these, over one thousand were sold, and their sale advertised my business more, perhaps, than it could have been advertised in any other way. Several of the pictures were reproduced in the college paper to



SOME POPULAR POST CARDS IN THE SERIES

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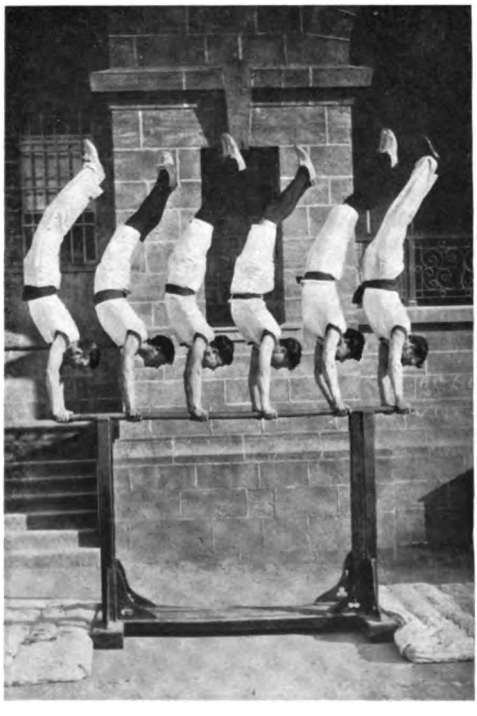
illustrate an account of the exhibition; and, when the athletic field day arrived, I was appointed the official photographer, and the sale of cards was even greater than that of the former exhibition. The little business was given another "boost," resulting in increased work to such an amount that it was found necessary to employ a helper.

Up to this time the work had been confined to developing and printing, and the making of post cards of college views, class and team groups, and the like. But I realized that the time had come when it was necessary to have a suitable place for portraiture. I had bought a 5x7 camera and otherwise increased my equipment in a very material degree. An enlarging camera had been installed and that branch added to the business. But portraiture was out of the question,



OTHERS OF THE POST CARD SERIES

owing to my lack of suitable quarters and my ignorance of retouching. The latter obstacle I surmounted, during the summer vacation, by taking lessons at a studio in the city. The same summer I obtained permission to erect a small studio in a secluded part of the campus. I spent nearly all of that vacation, when not following the retouching lessons, in building the studio, but the time was well spent. The next term I began doing portraiture.

Good portraiture needs, perhaps, more experience and practice than any other branch of the work. My work done in this line was mostly post cards and the cabinet-sized photographs, generally full or half length. I first stuck pretty closely to the simple forms of portraits, trying to get at something better as time and experience permitted. By this time, despite the fact that I had a

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A POPULAR STYLE OF "AT HOME" PORTRAITURE

helper, the business had assumed such proportions that I could not manage it alone, and I resolved to take in a partner. This was one of the most profitable steps taken. With a partner, one is not tied down to the business all the

ANOTHER EXAMPLE OF "AT HOME" PORTRAITURE

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time, and is capable of turning out much better work. We set about improving the studio, in the meantime finding it necessary to engage a second helper. In the course of time the little place was patronized by members of the staff and faculty; and, although we did not try in any way to compete with the finer products of the city studios, we were generally able to satisfy the wants of our patrons.

I have omitted to mention two other branches of the work, which, during this time, had been developing into very profitable lines: the handling of Kodaks and photo supplies, and the doing of home portraiture. Home portraiture is a line of work which seems to find a demand almost precisely in accordance with the facilities which are at hand to supply it. A person who would never think of sending for a professional photographer to have views taken in and about his home will often make a good customer when the idea is suggested to him, especially if some friends or neighbors have had theirs taken, and there is some one on the spot to do the work at a moderate price. This work is not only very profitable, but it is one of the most interesting lines. We were frequently sent for to take photographs in and about the homes of our patrons, and a satisfied customer in this line almost invariably brought us work from his friends to whom the idea appealed. A couple of pictures of this sort are reproduced herewith.

The other line, the handling of Kodaks and photographic supplies, also finds an increased demand in accordance with the facilities at hand to supply it. The fact that one has a little establishment right on the campus, and is always at hand to consult, should anything go wrong, gives confidence to many who would otherwise be skeptical about buying and using a Kodak. Being a student himself, one can meet the students on their own ground and in a manner not possible to a professional dealer. One can interest them in the hobby by showing them, with his own work, what can be done, and one can offer to help them over their difficulties. When I started, the number of students using Kodaks was surprisingly small. It was thought to be too much trouble, the films and plates had to be sent to the city to be developed, and other obstacles seemed to present themselves. With a little place at hand, ready to do the work and myself prepared to help the user, a considerable number of Kodaks were sold. Naturally, the more Kodaks one sells and the more people one gets interested in photography, the larger the business grows.

At present the little business is progressing nicely. A 10x12 camera has been added to the equipment, and the range of work thereby very materially increased, as with it we are able to do the larger senior and society groups. Should the opportunity present, we hope to enlarge the studio and still further increase the equipment. Outside work is employed to help us over the rush periods; and, on the whole, we do not find ourselves so very much crowded for time. In the two years of its existence, the little business has not only helped us to meet our college expenses, but it has enabled us to start a small bank account that will be of great help when we come to strike out into the world for ourselves.

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Tripak Color Photography

By Frederick E. Ives

That indefatigable worker in his chosen field of photography, Frederick E. Ives, needs no introduction by us; but, for the benefit of the more recent recruits to the photographic ranks it might be well to explain that he is one of the pioneers in color photography, ranking as our most accredited and most creditable investigator and inventor. For his work he has been awarded the Progress medal of the Royal Photographic Society of Great Britain, the Elliott Cresson medal of the Franklin Institute, a special gold medal by the Photographic Society of Philadelphia, and other honors. At our request, the article herewith was written in such form as to give only a brief and simple introduction to the subject, with sufficient recording of past and present achievements to establish in the mind of the reader the status of the Tripak system.—THE EDITOR.

The only processes of color photography which have any practical importance are trichromatic. This fact is interesting because the trichromatic principle, although more than half a century old, was, apparently, quite discredited twenty-five years ago; and, even after the application of scientific procedure brought successful results in 1888, it was, by most people, long regarded as at best but an imperfect, clumsy, temporary makeshift, to be played with only until the imminent discovery of a direct process. This prejudice against what I have always contended was the only rational line of experiment aimed at achieving practical results has been a very serious handicap to the very men who have done most to evolve the methods that are now universally recognized as having great and growing importance, and this prejudice has greatly retarded progress. And, furthermore, the true prophets were men of such limited financial means that they could give but a portion of their time and apply effort only along the lines of least resistance. They were, by this same financial restriction, forced to rest, from time to time, on successes too limited in character to bring material reward in view of the prevailing prejudice against indirect methods.

The first real success, the most scientifically accurate and the most perfect as to results, setting aside its lack of commercial importance due to limitations as to application, was color photography by triple lantern projection and the photochromoscope. By the invention of special cameras and other devices, this was made almost as simple in practice as anything we have today, but an optical instrument was required in order that the colors might appear as properly mixed to the eye.

Then followed the development of my method of three-color halftone printing, of great commercial importance, but practically limited to reproductions in large editions and under special conditions, requiring an expensive plant and the employment of specially trained and highly skilled labor. Meanwhile, lantern and window transparencies were successfully made by a comparatively simple

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process of my own, and later by other like processes; but none of them had much commercial value. The mosaic three-color screen process of DuHauron, Joly, and MacDonough was also experimented with; and the first simple and practical process, a modification of this, the Autochrome of the Lumiere Brothers, was made available. This last is not really a very simple process, but the fact that the most of the work is done in the manufacture of the plates makes the practice of autochrome photography quite simple.

The Autochrome and similar processes which have followed, now known as "screen processes," have come to stay, because they meet certain requirements with the least possible exercise of labor and skill on the part of the photographer. But they also have serious limitations. The best Autochromes transmit less than a quarter as much light as ordinary lantern transparencies; they can be duplicated only with serious loss of quality, and the results cannot readily be modified for artistic purposes. These limitations are inherent in processes of this character.

It will be admitted that an equally simple and practical process, free from these limitations, would be immensely more valuable, but that is not possible as long as we have a multi-color screen ground to our pictures. For that and other reasons I have always believed that the process that would develop the greatest ultimate importance would be a process of triple negative and print making, something on the line of my original transparency process of 1890.

The new Tripak process is the successful development of this idea. It is not as simple in operation as the autochrome process, but it is incomparably simpler than any other method which does not have the characteristic autochrome limitations which I have mentioned. It bears to the latter somewhat the same relation as does the production of ordinary negatives and prints to the production of tintypes. In the Tripak process, we make three negatives to represent the three primary colors, and from them in turn make three transparent color prints; which, when superimposed in register, complete the color photograph. I did this more than twenty years ago, but it is now done differently and by more simple means. With plates, screens, films and dye baths standardized, as they now are, the process is eminently practical.

The negatives are made in a simple, special camera, simultaneously on three plates used in the form of a pack, a pack that allows of their being handled, exposed and developed as a unit. The transparencies made from these negatives are also handled as one plate until cut apart after development and before inserting in their respective dye baths. An unlimited number of transparencies can be made of any one subject, from the one set of negatives made thereof, and prints on paper can be made by the pinatype process or with trichromatic carbon tissue; but, owing to its simplicity, only the transparency application is at present recommended for amateurs generally. If the several steps of the process are correctly carried out, the results are remarkably true to nature; but one of the characteristic and most important features of the process is the facility with which the effects may be modified, generally or locally, for artistic purposes. Any color can be reduced or intensified, or altered in hue, in a few moments, using ammoniated water or acidified dye solution.

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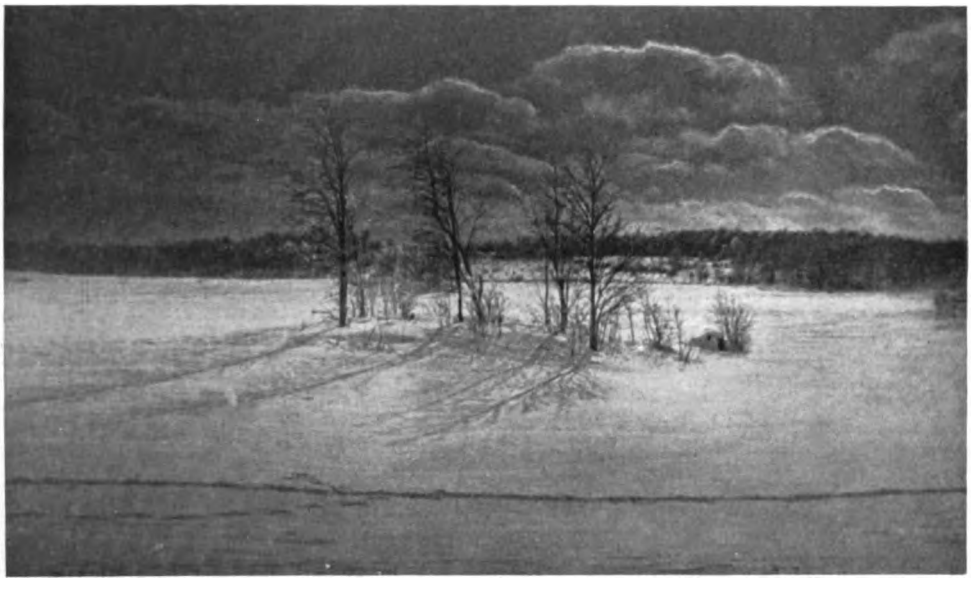

MOONSHINE By D. P. CHURCH

The Tripak System In Brief

By H. E. Blackburn

A Manual of Instruction for the Tripak System of Color Photography, as well as a catalogue of the necessary equipment and supplies, the latter now on the press, can be obtained by applying to the Tripak Laboratories, Woodcliffe-on-Hudson (Guttenberg Postoffice), New Jersey. In the former Mr. Ives says: "In any case, if unsatisfactory results are obtained, it is well to send the negatives and prints to headquarters for criticism and instruction; and at a fair price for cost of labor prints will be made by an expert and returned with record of exposure, time of drying and other details." It is obvious that working at a process with expert advice so easily available is more conducive to success than would be the case otherwise.—THE EDITOR.

Roughly, those processes designed to give us photography in colors may be divided into two classes, the "screen plate" processes, of which the Autochrome is the most familiar example, and the trichromatic or three-plate process. Laying aside the first, the three-plate process is one that has engaged the attention of workers all over the world for a number of years. Hinging, as it does, upon the securing of three negatives of the same subject, each of the three recording its own separate and distinct primary color sensation, or, in other words, each of the three plates taking care of the color sensations of a given portion of the spectrum. Positives or prints from these three negatives, made in the correct colors, and superimposed, give the photograph in the colors of nature.

The research and experiments of the plate-makers, the manufacturers of dyes, and investigators along the line of spectroscopic photography, have,

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within the past few years, made possible a much more satisfactory supply of available material. But the difficulty inherent in any plan to expose the three necessary plates in succession has only recently been met by a simple, practical method of making the three exposures simultaneously, despite the efforts in that direction for many years past. Cameras have been devised in which the grouping of three small lenses, or some ingenious arrangements of prism or reflectors, or both, have solved the problem more or less satisfactorily. Mr. Ives patented a large variety of such cameras. But, despite the easily overcome disadvantage of having one of the three negatives in a reversed position to the other two, the Tripak System of Ives seems to be the most practical method yet offered to the worker seeking to produce photographs in natural colors by the three-plate process.

As the name indicates, the system hinges on the use of a trichro-plate pack which consists of three plates, a red-sensitive one and a green-sensitive with their face or emulsion sides together, and a third, or blue-sensitive plate, hinged thereto with a strip of gummed paper. The same strip of gummed paper also holds in position a black backing card. These three plates, the gummed strip, and the backing card are shown as A, B, C, D, and E in the illustration herewith; the blue-sensitive plate is cut a trifle shorter than the other two, and in the illustration is shown as allowed to drop forward flat at the bottom of the camera, after the withdrawal of the slide of the special holder designed for the plate pack. When the pack is inserted in the holder, two ledges at the ends hold them, by means of a spring, with their films in close contact, while the hinged blue-sensitive plate is allowed to fall forward as shown. This done, a transparent yellow reflecting screen, F, is lowered from the upper part of the camera by means of a lever on the outside, taking the position as shown in the sketch. The usual color-compensating screen is, of course, used at the front of the camera. This equalizes the exposure for the three plates and assists in the color selection. The exposure is about the same as for an autochrome plate. G, as shown, is simply an opaque shield to protect the blue-sensitive plate from any light from the lens other than that reflected from the yellow reflector, F. It is apparent that the blue-sensitive plate receives the blue rays reflected by F, while the green and red rays are the only ones allowed to act upon the green and the red-sensitive plates at the back of the camera. These green and red rays act first upon the green-sensitive film from the back, the red passing through and acting upon the red-sensitive film from the front, or vice versa, according to the construction of pack and compensator. After the exposure, the reflector, F, is raised out of the way, the C or blue-sensitive plate turned up into position by another lever, and the slide of the holder replaced.

This arrangement assures all three of the images being exactly the same except that two are reversed from the ordinary negative image, one by being taken through the glass and the other by being reflected, much as one reverses the image in copying by using a prism in front of the lens instead of this reflecting screen behind. In making positives from the three negatives, it becomes only necessary to reverse the position of the prints from the positive

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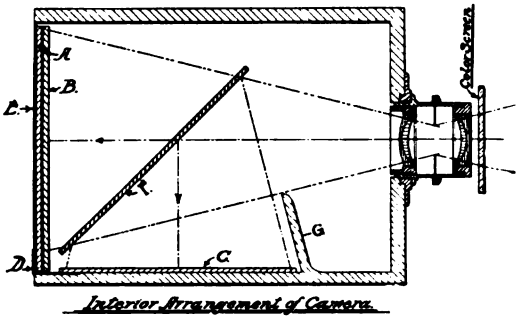

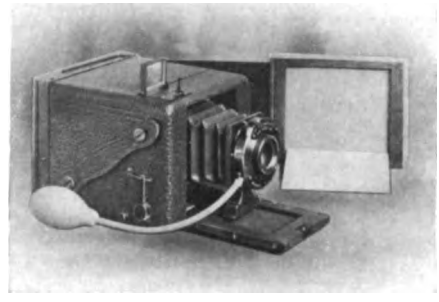

positioned or reversed negatives, the collodion positive films being so thin that the registration of the prints is not affected. The exposed "pack" is developed by time development in a special rack in which they are held separated like the open leaves of a book. To make color transparencies, the three negatives, these negatives themselves showing no color, are placed side by side in a printing frame, a collodion film placed thereon, the back closed, and the exposure, from one to twenty minutes in direct sunlight, made. The length of exposure is found with a simple photometer and the great variation given is only due to there being two speeds of the collodion film, the slow being much the best in keeping quality.

Development is accomplished by less than five minutes' washing in hot water, the film given a hardening and mordanting bath, then washed for a minute or two, and finally immersed in a hypo bath to remove the bromide of silver. A short washing follows, after which the prints may be placed to dry or at once cut apart and each immersed in its proper dye bath; the print from the red-sensitive plate in peacock blue, the one from the green-sensitive plate in a magenta red, and the blue-sensitive in a yellow. About five minutes are required for the absorption of the requisite amount of the dyes; and, in order that all three may be of the right depth at the same time, suitable dyes have been selected and their strengths standardized, as has everything else possible used in connection with the process. These colored films, rinsed off, given a weak acid bath, and then dried, require only being brought into register and bound together between two sheets of glass to form the perfect transparency in colors. A complete, triple-print transparency can be made complete in about half an hour. The negatives are available for as many of these transparencies as one may wish to make, and they are also perfectly suited to the production of prints on paper by the superimposed carbon, pinatype, or other like processes, although these last have not as yet been made so simple and satisfactory as the transparency process.

In the above brief resume of the Tripak System I have failed to more than mention the advantages afforded by Mr. Ives' care in standardizing every possible factor that could add to the simplification of the process. The worker who employs the ordinary three-plate process finds, quite early, that to use three different kinds of plates, the relative sensitiveness and suitable color sensitiveness of each liable to change with different emulsion numbers, and adjust

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the relative exposures and depth of filters so as to produce equal density and gradation in the resultant negatives, he has set himself quite a task. While the production of three-color pictures may justify the care and attention otherwise demanded, the effort to harmonize the plate, filter and exposure factors is a discouraging affair. In the Tripak System this last has been so nearly standardized that the process becomes wellnigh automatic. On the other hand, correction of errors in exposure and development is a very simple matter. Prints can be given a longer or shorter exposure, dyed for a longer or shorter time; and, if the result should be "off key" through one of the prints being too strong or too weak, that print alone can be reduced or made stronger by re-immersing in the dye bath or by taking it at once to the acetic-acid bath without rinsing. But, as supplied, the packs are made up of plates of recognized standard manufacture having good keeping quality, the screen and filter used are in perfect accord and so selected as to give one uniform exposure to all three plates, and an exposure that permits of time development that results in equal density and gradation in all three.

The camera is compact and simple, perfectly adapted to the making of ordinary negatives in the ordinary way, should the user so desire. And concerning the results, the writer has had the pleasure of seeing a number of slides by the Tripak process and can vouch for their excellence. They transmit almost as much light as the ordinary lantern slide, and many times as much light as the Autochrome. They are perfectly free from granularity, and exhibit a most pleasing brilliancy, making them particularly suitable for lantern projection. These advantages, coupled with the unlimited duplication of the positive transparencies, together with the beauty of the finished results, compensates the worker in a great measure for the lack of corresponding facility in the production of positives on paper, a shortcoming not inherent in the Tripak System, but one only emphasized by the facility provided for the making of transparencies by the process.

Prints can easily be made upon paper from the Tripak negatives by the Pinatype process. Three positives are made, successively, from the red, green, and blue negatives, upon Seed's positive celluloid films. Three fixed-out, unexposed dry plates are sensitized in a four per cent bichromate bath and dried in the dark. The positive from the red negative is printed direct, film to film, on one of these print-plates; the positives from the green and blue negatives are turned over and printed through the celluloid on the print-plates, so as to overcome the reversed images of those negatives.

The print-plate from the green negative, after washing, is dyed up in Pinatype Red, rinsed and transferred to the wet gelatine paper of the Pinatype process. The print-plate from the blue negative is next washed out and dyed up in Pinatype Yellow, and placed in register with the still wet red print. The print-plate from the red negative is washed out and stained up in Pinatype Blue, and then placed in register with the wet red-yellow print; when, upon removing the blue print-plate, one has a three-color print with all the colors in one film. The dyes, print-plates, and gelatine-coated paper can be purchased from Victor Koechl & Company, 122 Hudson Street, New York City.

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A Cheap, Practical and Portable Enlarging Camera

By J. Harry Millar

Entering the sanctum sanctorum of a local newspaper one day, I showed the editor some prints which I desired to enter in a prize photograph contest that was running in the paper. Selecting a 6½x8½ print, of an old cobbler at work, the editor said: "I can use this for the front cover page of the Sunday magazine, and will pay you three dollars for it." And, selecting a number of 4x5 prints, he added: "If these were 8x10, instead of 4x5, I could use these also."

The editor's suggestion set me to thinking; and, upon my arrival home, I began looking up catalogues of enlarging apparatus. But all of them were too expensive, and, besides, the most of them required a dark room. What I wanted most was a daylight enlarging apparatus, portable, and capable of enlarging from 5x7 to 8x10, it being my intention to use Artura Carbon Black developing paper, arranging so that all I would have to do would be to cover the windows with orange paper, thus doing away with a dark room. Consulting the back files of a number of photographic magazines, I found a number of home-made apparatus, but none of them exactly suited me; so I finally decided to make one to suit myself. Having a 4x5 camera with a lens of six-inch focus, the first thing I did was to find the distance that was required from the lens to the paper enlargement, and the distance from the lens to the negative. The following rule holds good in all cases: To find the distance between the lens and the paper enlargement, add one to the number of times you want to enlarge and multiply the result by the focus of your lens in inches. As an example: A 4x5 negative enlarged to 8x10 is a two-time enlargement (four times in area); two plus one equals three, and three times six equals eighteen, the number of inches distance of the lens from paper enlargement. To find the distance of the lens to the negative, divide the above result, eighteen inches, by the number of times you want to enlarge; thus, eighteen divided by two equals nine, the distance in inches from the lens to the negative.

With these figures as a working basis, I began the construction of the enlarging camera, which finally shaped itself as shown in the illustration herewith. As can be seen, it consisted of an enlarging box, entirely open at one end; a bottom board or easel of two square pieces, the smaller square fitting the inside of the box, and the larger being the size of the outside of the box, forming a flange and excluding all light from entering; and a negative holder which slides back and forth upon a slide screwed on the side of the box, facilitating the focusing of the enlargement.

I will now give the details of the construction. In the first place, I made a box, eight and one-half inches wide, ten and one-half inches deep, and fourteen inches long, inside measurement, using three-quarter-inch lumber, as shown

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in the sectional drawing A. One end was left open and in the center of the other was cut a hole, five inches square. Over this hole I placed the camera, as shown at B, and nailed some quarter-inch strips on the box, all around the camera back, thus excluding all light; and, at the same time, locating the camera in the right position.

The next to be made was the end board or easel, consisting of two pieces of the three-quarter-inch stuff, one 8½x10½, which should fit easily into the end of the box, and a larger one, 10x12 inches, the outside dimensions of the box, as shown at C. Nail the smaller one on the center of the larger, crossing the grain of the wood in so doing. This end board is the easel upon which the sensitive paper is fastened with push pins, and should be covered with a sheet of white paper, pasting it on the 8½x10½ board with a thin coating of Le Page's glue. The next is the slide, D, which is simply a piece of wood three-fourths inch thick, three and one-half inches wide, and twenty-six inches long. I screwed this on the side of the box with four screws, placing it exactly in the center and parallel with the sides of the box. Care must be taken to make this slide parallel; if one does not, the holder will not slide freely upon it. Next came the negative holder, E. I took a three-fourths-inch board and sawed out a piece of the same lumber, eight inches wide and ten inches long, cut a hole 5½x7½ inches, leaving a margin of one and one-fourth inches all around. I then cut two strips, one and one-fourth inches square, eight inches long, and glued and nailed one on each side of one end of the frame. I next cut two pieces, 2¼x3¼, and glued and nailed these on the bottom of the frame; and a 3¼x8-inch piece is also glued and nailed on the bottom of the frame. This last left a ¾x3½-inch opening through which the slide could work freely. In the center of the bottom of this negative holder was bored a three-sixteenths-inch gimlet hole to take the tripod screw. This last, by screwing it in and out several times, cuts its own thread, and answers the purpose of preventing the holder from sliding when once in position.

A one-inch hole in an upper corner of the camera end of the box serves as a peep hole through which one can watch the focusing of the image on the end board or easel. This easel is put in place and held there by two flat brass hooks, which can be purchased in any hardware store. The camera is held in place by two buttons, placed on blocks of wood the height of the sides of the camera, as shown at F. I bored a hole through each block, passed a long, thin screw through a button and block, and screwed them into the end of the box, one set on each side of the camera. Two pieces of clear glass, 6x8, are held in place in the negative holder by means of buttons, the film negative being placed between. All the cracks were puttied up and the inside of the box blackened, this last being done by mixing some lampblack in alcohol and adding a small quantity of shellac to give it body and prevent it from rubbing off. With a pocket knife I cut away the edges of the peep hole so as to have an unobstructed view of the image on the easel.

Now for the dark room. One does not really need a dark room in the sense that it is used; a bath room with the window covered up with orange paper will do, or even a large room with the shades drawn and pinned close

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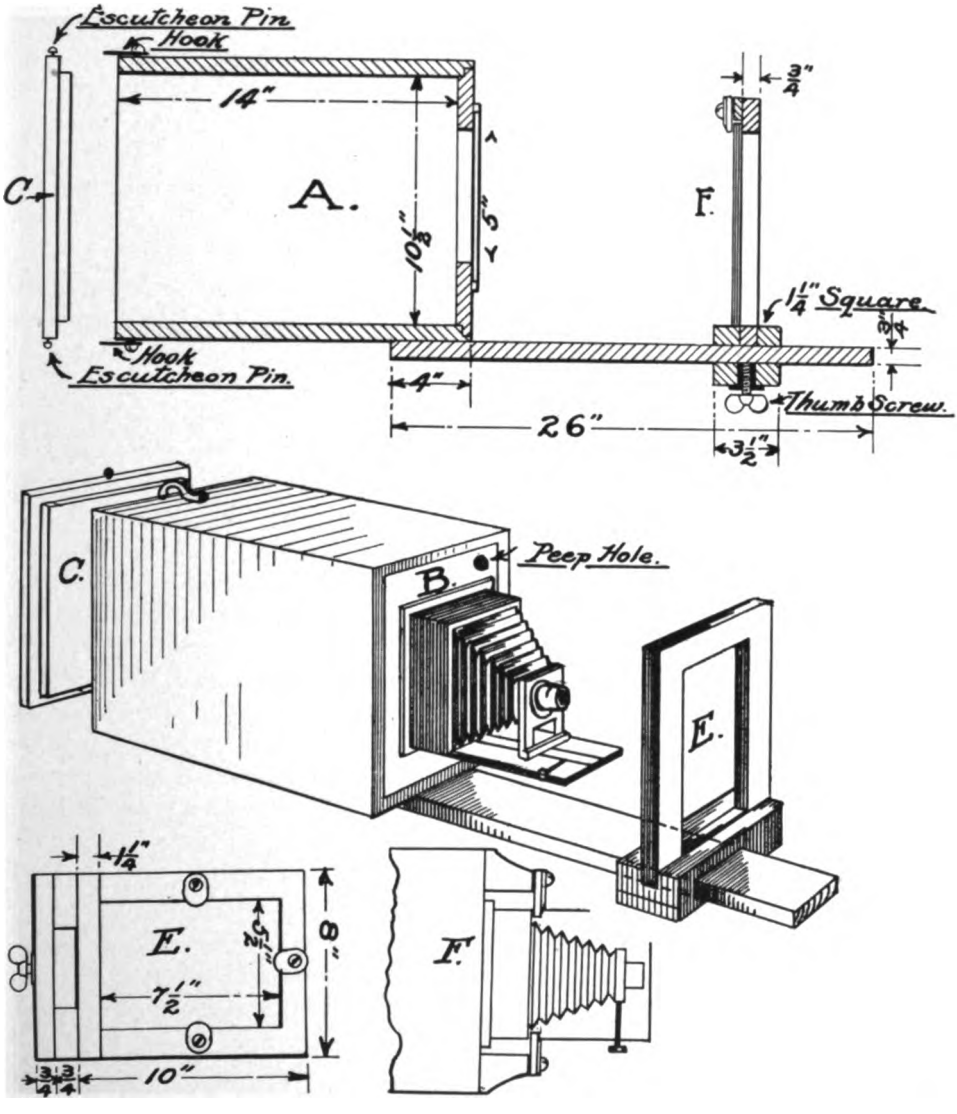

to the window casing will answer. It is best to leave a space in one of the windows to be covered with orange paper, doing the developing about ten feet from the source of light.

To operate the camera, place the camera on the enlarging box, holding it in place with the buttons; hook the end board on, put a negative between the 6x8 glasses, and fasten in place on the holder, film side towards the lens. Take the camera outdoors, into a shady place, point it at an unobstructed portion of the sky, and, having previously located the negative holder on the slide, twenty-seven inches from the easel or end board, place your eye close to the peep hole so as to exclude all extraneous light, and on racking the lens in and out in a few seconds one will see the image on the easel. The easel should have heavy, black lines drawn on it, inclosing parallelograms from 5x7 to 8x10, so one can readily see

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what size enlargement is being made. As soon as the negative holder and lens are in the right place, the camera is taken into the dark room, the easel removed, and, with push pins, a sheet of Artura Carbon Black fastened in place and the easel hooked on. Again carrying the camera outdoors, the exposure is made. This last is about five seconds, using stop 16. It is best, however, to make a trial exposure on a strip of paper, using a normal negative, and in that way find the actinometer time, once and for all, so that actual exposure time may be found for other negatives when enlargements from them are wanted.

If the trial exposure shows that five seconds is correct, I take the same negative and expose a strip of printing-out paper under the same conditions, making a contact print in a printing frame. If, let us say, this takes one and one-half minutes, or ninety seconds, to print, I divide ninety by five, and the result, which is eighteen, is the actinometer time for the enlargement. This will enable one to find the exposure time for the enlargement at any time of the day, all that is necessary being to divide the time it takes to make the contact print by the actinometer time. A cork is inserted in the peep hole while making the exposure, otherwise the result would be disappointing.

The working proportions of this camera will permit the use of lenses of from six to eight inches focus, and the making of three-time enlargements of heads or figures is possible with the shorter focal length. One can make needle-like enlargements that cannot be told from contact prints; while, on the other hand, if one goes in for artistic effects, the prints can be made as soft as desired, something that cannot be done in a fixed-focus enlarging apparatus. Paper negatives can also be made. Large trays will be needed for the pictures, but they are easily made by lining shallow boxes with oilcloth or painting them with Probus paint.

In conclusion, some times packing boxes, such as plates come in, can be used for the body of the box. The whole enlarging camera, as described, can be made by any cabinetmaker for two or three dollars; and, considering the fact that one can use his own lens, there should be some inducement to have one made.

The Pictures Opposite

The two pictures opposite will give some idea of the possibilities of the Bodine Pictorial Lens in the hands of an amateur worker who has not yet had an opportunity of becoming thoroughly familiar with it. The two pictures are selected from a few exposures made by Mr. Hoyt in his first trial of the lens. The lens is hardly suited to the size of plate used, being a 4x5, but wishing to learn just what it would do, it was placed on a 5x7 camera and so used. In our next issue we will reproduce some pictures made by another local worker, G. W. Gwynn, together with an article covering his experiences with it. In a still later issue we hope to have an article from Mr. Bodine in which a few suggestions will be set forth that will be of value to those interested in the possibilities of a lens of this type as a means to pictorial ends.

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IN GOLDEN GATE PARK — By H. S. HOYT

Made with a 4x5 Bodine Pictorial Lens used on a 5x7 plate; lens at full opening, April, 10 a. m., light hazy, one-fifteenth second exposure.

PORTALS OF THE PAST — By H. S. HOYT

Made with a 4x5 Bodine Pictorial Lens used on a 5x7 plate; lens at full opening, April, 12 m., weak sunlight, five times color screen on lens, one-fourth second exposure.

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Some Things I Have Found Out

F. Belmont Odell

WHERE SUNLIGHT STREAMS

From the loading of the plate holder to the final mounting of the print, there are no less than sixteen separate and distinct operations necessary. Failure to perform any one of these operations, in its regular order and with a fair degree of accuracy, means poor results or utter failure. Besides all these, there is the preparing of the developer and hypo, as well as the regulating of the temperature of both, which must be reckoned with; also, the ever-present possibility of a leaky plate holder or bellows and an unsafe ruby light. Barring the very rare cases of faulty plates or chemicals, every photographic failure is directly traceable to carelessness or ignorance in performing one or more of these consecutive steps. If every step in the evolution of a photographic picture could be governed, absolutely, by fixed rules, the making of photographs would be less fascinating and more often successful.

With all these chances to fail, and with a dozen or more questions which cannot be answered by any teacher save experience, it is no wonder that the beginner gets poor results and often abandons a recreation which might become his chief source of pleasure. If a beginner makes good pictures at the start, as is often the case, it is an accident, always. He may think he is endowed with special genius which has carried him, slick and clean, over the experimental stage; but, sooner or later—usually sooner—there will be an awakening and he will feel a sickening sense of failure creeping over him. Then, and not till then, is he in the right mood to begin to learn.

This is the critical point in the tyro's career, for he cannot decide whether to give his camera to his sister in order to get even with her, or to throw the infernal machine in the canal. My advice is, don't, in great big horse type. Keep your camera, and part with it only when you can afford a better one.

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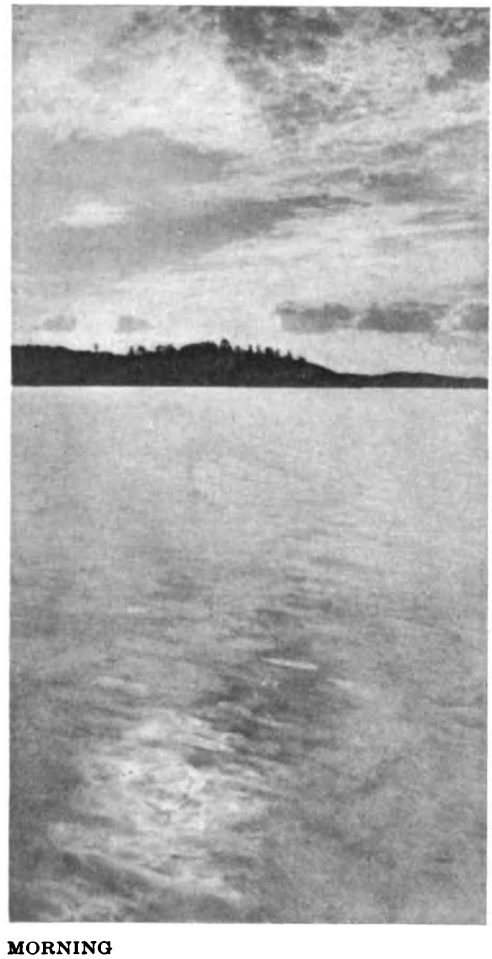
Get on speaking terms with its mechanism. When you find out that you, not it, must do the brain work, you are over half way on the road to success. Read your instruction book, then read it over again. Get to know the process intimately; then, in the light of acquired knowledge, try all over again, carefully, deliberately. Do not look at the process of picture-making as a whole; it is staggeringly complicated viewed in that light. Separate the process into its integral parts, step by step, loading the plate holder, setting up and focusing, diaphragming, withdrawing slide, exposing, inserting slide, and so on through the process. Mystery and alchemy will change to plain, every-day laws of cause and effect. When you turn out a failure, look back over the successive steps and find out which one, or ones, you omitted or did the wrong way.



MORNING

Learn to do your own finishing, otherwise you lose half the pleasure of the craft and preclude your own progress; and besides, it is more economical. Don't mourn the money you pay for supplies; they're cheaper than club dues or automobile tires, and their use is infinitely more wholesome than the pursuit of some other hobbies of which I know.

Don't wobble around trying every kind of plates manufactured; stick to one brand. Do the same with regard to paper and chemicals. Some brands of plates fix out more in the hypo bath than do others; then, again, the same brands of plates fix out more if developed with certain developing agents than they do with others, and you must allow for this, carrying the developing a little further. Those are two of the many reasons why you should stick to one make of plates and one kind of developer until you get acquainted, as it were.

What exposure shall I give? Well, how long is a piece of string? Let me see the string and I'll tell you its approximate length; likewise, show me your subject, light, stop, lens, and the label on your plate box, and I'll guess pretty straight on your exposure. Better settle this exposure question for yourself. You'll eventually have to, anyway, in spite of all the generalizing you read or hear on the subject. Settle it the way I did, after guessing at exposures

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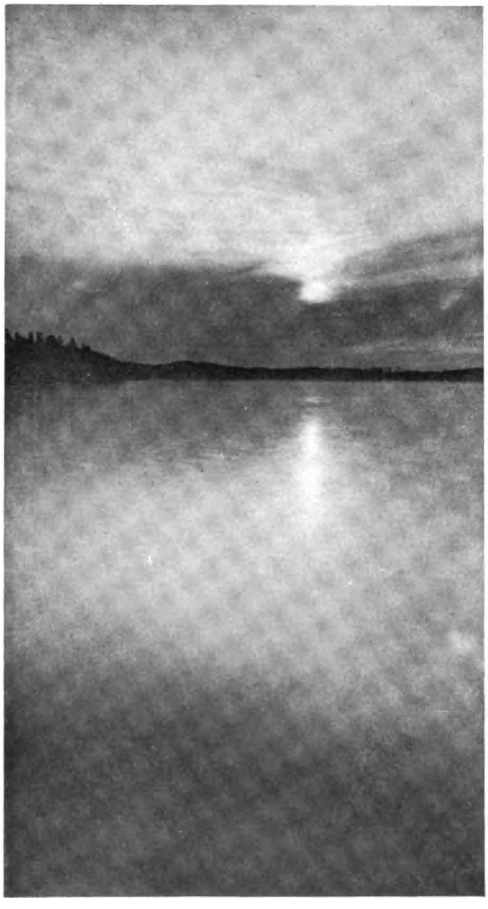
all one summer and getting about a dozen properly exposed negatives out of a hundred or so exposures. Get a box of plates, some standard brand, and make up your mind to use them up—waste them if you must—finding out how to expose. And again, don't grieve over the cost, for the knowledge you will gain from intelligently experimenting with this one box will save you dollars and disappointment forever after. Expose each of this dozen plates under different conditions of light, and keep a record, in a little memorandum book, of stop used, time of day, and length of exposure. Better, expose at least two plates on each subject, giving, say, twice the exposure on one that you do on the other, and keep an accurate account; marking the plate holders in some way so you will not get them confused later. When these plates are developed, you will know which are correctly exposed, or nearly so; and, by comparing each negative with the data concerning it, you will be able to settle, for all time to come, the correct exposure for conditions similar to those under which these test exposures were made. Work out the problem by experimenting along these lines, and this one box of plates should teach you more about exposure than I could in a month.



EVENING

Amateur photography embraces so many pleasant and profitable branches that it is a wonder that its army of followers is not larger than it is. Such lines as the photographing of animals, architectural work, flower studies, botanical and natural history records, home portraiture, pictorial landscape photography, enlarging, copying, the making of decorative calendars and souvenirs, and water-colored photographs, all and more come within the scope of the amateur.

If you continue in this fascinating craft, you will some day be seized with an overwhelming desire to own a high-grade lens. Very fine, indeed, these anastigmats; but don't make yourself miserable if you cannot quite afford one. You'll get one when it is time for you to have it; and, by the way, your rapid rectilinear possesses more virtues than the makers of anastigmats tell you about in their catalogues. Never mind about distortion, aberration, chromaticism, and all the other diseases rectilinear lenses are supposed to have.

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A PARK LANDSCAPE

Trimming and mounting are an art quite as important as the actual making of the pictures. It takes courage to chop off an inch or two from a cherished print, every bit of which is dear to the maker, but it nearly always improves its value by concentrating interest; also, by establishing a balance, trimming often corrects faults in composition. Neatness and taste are the two best words in the category of advice on mounting. Ever see an attractive print pasted on a gaudy mount, with a fringe of dried paste around its edges where the print was shifted about to center it? Nice, aren't they?

Don't place the print exactly in the center of the card, for the very good reason that things mathematically correct are usually artistically incorrect. Mount a little above the center to offset the natural tendency of the human eye to exaggerate distances above the center of objects. Most of the amateur mounts found in the stores do not admit of so mounting, on account of embossed edges, fancy borders and marginal lines; which is sufficient reason for condemning their use in most cases. Art cover paper, which can be bought in artistic finishes, and in a variety of shades and degrees of thickness, makes a sensible receptacle for prints. It comes in sheets about 22x28, at five to fifteen cents a sheet, and can be cut to order at the stationer's.

Artists are of three classes: those who perceive and pursue the good, and leave the evil; those who perceive and pursue the good and evil together, the whole thing as it verily is; and those who perceive and pursue the evil and leave the good.—JOHN RUSKIN.

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Recording Negatives

By E. M. Barker

It is not my intention to bore you with a subject that to some may seem a useless waste of time; but, like many things in this life, a system or regular routine is essential, in order to lay one's hands on any particular object when wanted, and do it quickly.

System is one of the best known time-saving institutions in photography, and when once installed can be carried on without limitation and with least amount of trouble; this is very true when negatives accumulate and for the want of a simplified manner of storing them away for future use.

Years ago I started to number my negatives from No. 1 upwards, but when the negatives ran up into the thousands, it consumed too much time to find what I wanted.

To overcome this, I adopted a system of classifying the negatives in the following manner:

DESIGNATION LETTERS	CLASSIFICATION
A	Landscape with streams.
B	Average landscapes.
C	Buildings, street scenes.
D	Sea views, clouds.
E	Monuments, statues.
F	Distant views.
G	Snow scenes.
H	Portraits.
I	Groups.
J	Athletics.
M	Miscellaneous.
*	Stereoscopic negatives.

which also acts as a key to the index for the negatives, which I will describe further on.

After destroying a great number of old negatives that had outlived their usefulness, I commenced to classify them as described above, keeping each classification to itself, and then put them in envelopes fully marked up, giving date, time exposure, subject and negative number. Each classification to commence with Number 1 upward with the designation letter suffixed, and transferred to pasteboard boxes, or wooden boxes if preferred, like shown in figure No. 1. By referring to the key or classification list, you will observe that I have stored away in all the boxes marked with letter "A" all negatives of "landscapes with streams"; in boxes marked "B," negatives of "average landscapes."

Your negatives are now all in good order and ready to be put away in some good dry place; but, before doing so, they must be indexed.

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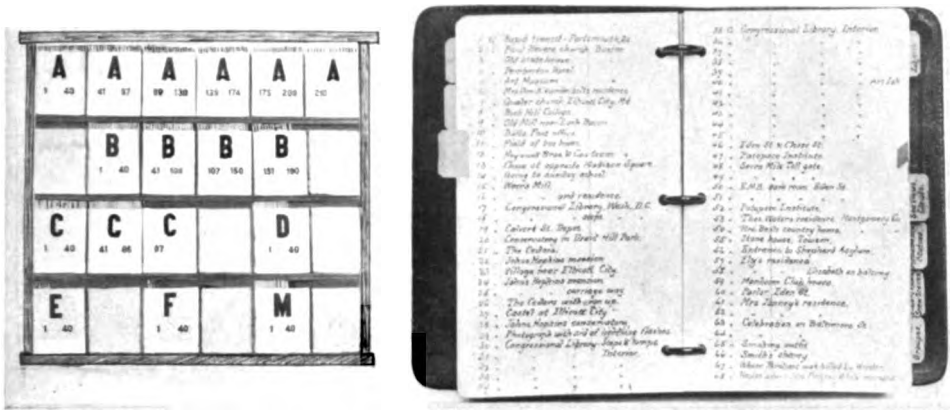

FIGURE NO. 1 THE INDEX BOOK

I would recommend using a loose-leaf book for this purpose, as it is very convenient to add a leaf to any classification of negatives as they grow in numbers. Use the key or classification list as a guide, and place it in front of the book and commence indexing your negatives in same order as classified, thumb lipping each page at the beginning of each classification. See Figure 2.

The system is now in good working order and can be kept up indefinitely and with great satisfaction.

For example: Suppose some friend wanted a print made of the "Patapsco Institute." In all the boxes shown in Figure 1 there are about six hundred and fifty negatives. Instead of going through the entire lot of negatives to find this particular one by the old way, you would, by the new system, know that the print wanted is a building; and, according to the key in front of the index, this negative will be found in boxes marked letter "C." Turn to page in the index for Numbers 1C and, by casting your eyes down the negative numbers, reading the inscriptions as you proceed, you will find the negative wanted to be Number 52C. You simply take down box C, numbered forty-one to eighty-six, and the negative is in your hands without loss of time.

I find it a good system. Try it and I think you will agree with me.

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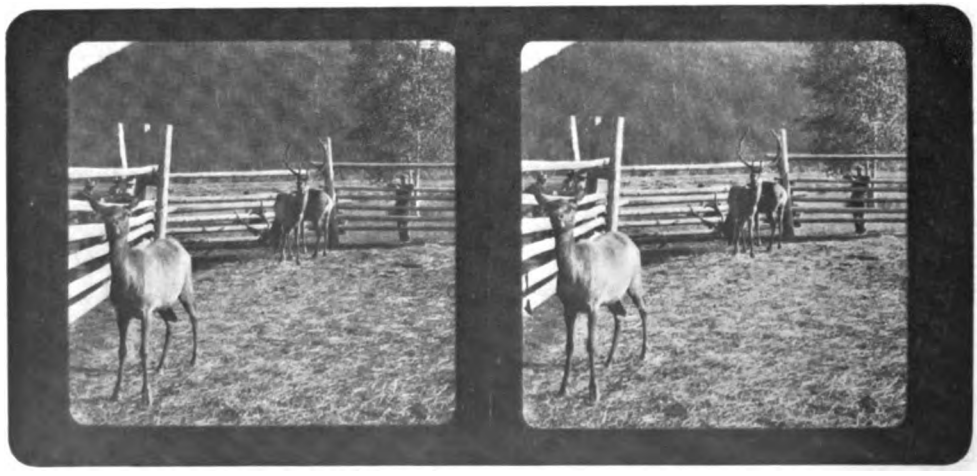
STEREOSCOPIC DEPARTMENT

Thin Stereoscopic Mounts

By W. S. Gerts

Finding my collection of stereoscopic slides was getting rather bulky, I cast about for some thin mounts. These were not hard to find, but mounting the prints thereon, and doing it so that they would not curl badly, was difficult. Then I decided to use double-weight paper, but found the white borders rather trying on the eyes. To overcome this last, I cut two pieces of opaque paper just the size of my two stereo pictures, and glued them the right distance apart on a sheet of ground glass cut to fit the printing frame, a 5x7, as I was using that size of paper. In making prints, I first put the paper back of the ground glass carrying these two masks and expose it long enough so that when the negatives are printed in the spaces corresponding to the two opaque masks, the prints develop up as they should with a black border. My stereo negatives are all cut in two and transposed so that they print correctly in these spaces, and using them in this way I avoid all masking, trimming and mounting. I have a sheet of paper that has been exposed for the black border only, developed, fixed, washed, dried, and then the white openings cut out. If I am in any doubt as to just what part of the negatives will print in the openings, I place this guide on the negative and by looking through the openings can determine just what position of the negatives will give the amount of subject desired, and



IN THE DEER PADDOCK — By W. S. GERTS

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fasten in position. I then place paper between guide and negative and print. It all takes but a short time, and, with a little care in the register, makes the work simple and much quicker than the usual trimming and mounting. My "Thin Stereoscopic Mounts" are really no mounts at all, simply the double-weight paper used alone.

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

CAPROMANCY CREDENDA: Corrigible camerists can correct crude and commonplace compositions by committing copy to Clute's candid cordial criticisms. Consequent correspondence calculated to cheer and chasten, completely crucifying conceit.—Camilla, Wisconsin.

A LABORATORY CONVENIENCE: In weighing sodas and other powders, it is difficult to control the flow from the retainers. Use a wooden mustard spoon, the kind grocers give away with bottles of mustard. It will go down into the neck of bottles, it is useful to convey powders to the scale tray, and it assists in getting accurate measurements.—F. Belmont Odell, New York.

MAKE ONLY PERMANENT PRINTS: After being appealed to, to copy, for the sake of preservation, a number of valuable, but faded, prints, I would recommend that beginners do not use any process of toning, or developing their work, that does not give absolutely permanent results; as time, in a number of ways, often gives value to many prints that cannot be replaced.—C. E. Rau, Iowa.

IDEAL BLUE PRINTS: Buy some albumen paper of George Murphy, Incorporated, New York, and sensitize it by floating on top of ordinary blue-print solution, doing it in the same way that the old-time photographers used their silver solution for sensitizing the paper. Dry and expose as usual. The results will be semi-gloss blue prints of a quality that will surprise you.—H. E. Blackburn, Pennsylvania.

DETERMINING EXPOSURE: A simple method of determining exposures, a Steadman stunt, is as follows: With a sharp blade cut a small square out of one of the leaves of your note book, slip a piece of Solio under the page with your thumb over the hole, hold in the place to be occupied by your subject, and,

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removing your thumb, get a first visible tint, one noticeable on lifting up the leaf containing the hole. Note the time required for the Solio to give this tint, that is, just start to darken. One-eighth of this time is the correct exposure for ordinary plates, using U. S. 4 or f-8.—F. Belmont Odell, New York.

ODOR OF AMYL ACETATE: All the formula books give directions for making a celluloid varnish by cleaning the emulsion from old film and dissolving one hundred and forty grains of the celluloid in sixteen ounces of amyl acetate. If the odor of the latter is objectionable, it can easily be overcome by adding sufficient oil of lavender to neutralize both.—H. E. Blackburn, Pennsylvania.

TO SAVE WORK: Instead of holding the printing frame to the light by hand, take your tripod and adjust it for height to give the right distance and so that the light will come over the center of the frame as it lies on the top. Then do your printing by placing the frame thereon. You will always get the same distance, you will save tiring your arms, and have your hands free to do a little dodging, should you wish.—I. C. A., California.

PREVENTING SPOTS ON PRINTS: Thoroughly washing the emulsion of negatives with a cotton swab, before placing them on drying rack, will remove the cause of many white spots on prints; and straining the fixer through filtering cotton, filtering developers, intensifiers and reducers, before using them the second time, and using strictly clean wash water, are good preventives of the same trouble; for the sponge-like character of emulsions when swollen by soaking readily arrests and holds "dirt."—C. E. Rau, Iowa.

REMOVING STAINS: Without going into a mass of useless detail, the following stain removers are worth recording: Metallic stains, a weak bath of citric acid; vegetable stains, permanganate of potash solution; ink stains, oxalic acid, thence to permanganate bath; aniline dyes, wood alcohol; mineral stains, sal soda bath; acid stains, any alkali bath; alkali stains, any acid bath; yellow-brown prints, acid fixing bath and tartaric acid; old faded print, peroxide of hydrogen; silver stains on negatives, hypo and citric acid bath.—H. E. Blackburn, Pennsylvania.

HARD AND SOFT PAPERS: For a long time I used only a "portrait" or soft grade of paper, thinking it must be the best because the professionals used it for their portrait work. I found out later that I was using the wrong kind for my snapshot negatives, some of which were inclined to be rather thin. I have since found that many beginners do not realize the value of the several grades of paper, but use some one particular speed for all their work. There are "hard" and "soft" grades of all the popular brands, and the worker should take advantage of the power which selection of the right kind places in his hands. The "hard" papers are those which print with considerable contrast, and they should be used when printing from flat or weak negatives. "Soft" papers should be used when printing from hard or contrasty negatives. As a rule, portraits are generally printed on a soft paper and landscapes on a hard paper. However, the quality of the negative is the best guide, influenced, of

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course, by a consideration of the kind of print wanted.—John W. Kimball, Jr., Vermont.

PHOTOGRAPHING RUNNING WATER: When photographing swiftly running water, such as rapids and waterfalls, so situated that a snap will not give the desired detail in surrounding rocks or banks, give a series of short snap exposures sufficient to get the desired detail in these less-favored parts. At first thought, this method would seem to have no advantage over the giving of one long exposure, but a comparative trial of the two plans will convince that while the latter gives the water a thick, milky appearance, the suggested plan retains much of the sparkle and snap of the one short exposure. Care must be taken that the camera is not moved in making the requisite number of snaps.—H. E. Blackburn, Pennsylvania.

FIXING AND WASHING PRINTS: When putting developed prints into the fixing bath, place the first one face down, the next face up, and so on. The slight curl, especially in the case of post cards, will keep the emulsion-coated surfaces separated. The same rule may be followed in washing, except where running water is used, then placing them all face downward is the best. A hypo solution is heavier than pure water and will sink to the bottom. A photographer that I know, one who suffers from a scarcity of water, simply soaks his prints, face downward, in a large tank. By so doing, and occasionally changing the water, and keeping the prints on the move, the prints show no trace of hypo when carefully tested after an hour or less treatment.—Richard Russell, California.

MY PET DEVELOPER: I think I have my developer down to about the most convenient possible arrangement. I keep on hand an ounce bottle of amidol, a pound bottle of sodium sulphite, a drinking glass that holds about two hundred cubic centimeters, and a horn spoon holding five grams of sulphite and another, a small mustard spoon, holding one-half gram of amidol. To make up a developer, I put two spoonfuls of sulphite in the glass of water, stir until dissolved, then add two spoonfuls of amidol, and the requisite amount of bromide solution. I find this is the cheapest and handiest developer for an occasional worker like myself. I use it for plates, films, paper and enlargements, varying the strength by using more or less water, and it gives me the best of results on all of them.—Carlton C. James, Hawaii.

THE EMULSION SIDE: In the April number I ran across a paragraph by T. P. Pettigrew, on loading holders in the dark. I have loaded mine in that way many times; in fact, sometimes do so in my own dark room. When a freshly opened box of plates is being used, it is not difficult to avoid getting the wrong side of the plate to the front, by simply following the order in which they are packed. But with a box that has been opened there is chance for a doubt. I moisten my thumb and forefinger and grasp the extreme corner of the plate, holding it for a few seconds. The side carrying the emulsion will stick to the thumb or finger, as the case may be, thus identifying the side to go up in the holder. This test was given me by a traveling photographer some ten years ago, and it has since come in very handy on many occasions.—A. C. Ames, Ohio.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, MAY, 1911 No. 5

The National Convention at St. Pau

On another page we reproduce pictures of the officers of the National Association and give a brief outline of the Convention program for the coming event at St. Paul in July. More information will follow as we are provided with it by these enthusiastic workers in behalf of their brother photographers. It has always been a source of regret to all concerned that the Pacific Coast has not been more fully represented in the annual gathering of the National Association members. The coming Convention at St. Paul is not so far East as heretofore, with the exception of the Minneapolis one last year, and that section of the country is in all its glory at the season selected, offering an inviting field for a pleasant and enjoyable trip. Mr. Harris, or any of the officers, would be glad to correspond with our photographers here on the Coast, but it is quite difficult to secure their names and addresses. If a few of our workers out here would attend the coming Convention, it is certain that more would follow their example each year, and that would result in a closer bond of fellowship that would do much towards giving us the National Convention in 1915 when the Panama-Pacific International Exposition is held. Send your name and address to G. W. Harris, President P. A. of A., 1311 F Street, N. W., Washington, D. C., and let him send you such announcements as may be gotten out.

The Salt Lake Convention

We have a full report of the Convention just closed at Salt Lake City, the Fourth Annual Convention of the Intermountain Photographers' Association, but copies of the prize-winning pictures have not reached us in time for block making for this issue. Therefore, the report will be held over until next month. Mr. Gutter, the energetic and enthusiastic Secretary who did so much for the success of the Convention, advises that it was the most successful one by far yet held by this wide-awake organization.

A Society of Color Photographers

As our readers know, CAMERA CRAFT has stood practically alone in this country in the matter of publishing original articles by both American and foreign workers in color photography. A description of the gum process employed by Mr. Muhr in producing the wonderful Indian pictures by Curtis was the starting point. Our pages have since contained many articles on color photography, including ones by Mr. Comley, Secretary of the Society of Color Photographers, of England, a prize winner of note in this interesting branch of photography. This month's issue contains an article by Mr. Ives describing his

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Tripak system, together with further matter on the subject by our frequent contributor, H. E. Blackburn. All this has been in our hands for many months, but its publication purposely withheld until such time as Mr. Ives could supply a catalogue of his equipments and do more than supply the most pressing demands for immediate delivery to those already in touch with his work. This brings us, quite naturally, to the explanation that these contributors of ours, and our many correspondents interested in color photography, are more or less in touch with one another, as well as with still others interested in the same line of work. This includes several American members of the English society mentioned above. It has been proposed that a like society be formed in this country, one that might co-operate with the older one in England, perhaps to the extent of exchanging an occasional portfolio of members' work. The advantages of such an exchange, supplemented by an exchange of notes and experiences, can be appreciated by anyone interested. Mr. Comley has been asked to give us the benefit of his experience in the conducting of such a society, and we would be pleased to hear from all workers in this country who are interested in color photography, to the end that a society may be formed to include as many as possible of our American color workers, particularly those producing photographs in colors by the Sanger-Shepherd, Pinatype, superimposed carbon, and like methods. A sufficient number of workers being interested, it will only remain for them to select one of their number as secretary, and a society is formed that will be of the greatest value and assistance to all. Any of our readers doing color work will oblige by communicating with us at once.

Let Us All Help

Our editorial, under the above heading, in the March issue, brought forth a number of most encouraging letters, nearly all of the writers expressing themselves in favor of the matter being taken up by the California Camera Club as the representative body of amateur photographers in this territory. Acting upon these suggestions, the matter was broached, unofficially, to a few prominent members of the Club, some of them on the Board of Directors, and by them the project was received with most gratifying approval. It will be brought up at the next meeting of the Board, and in our next issue a definite plan of work will no doubt be outlined. We thank those of our readers who came forward with their suggestions for the interest displayed and their kindness in the matter.

To Secure a Copyright

Some of our readers, from time to time, write to ask how to go about getting a photograph copyrighted. It appears that a great many neglect to protect their work, simply because they do not know how simple and inexpensive the securing of a copyright really is. A few words may not be amiss on the subject.

The fee is but fifty cents for each photograph, and that amount, in the form of a money order or express order, must be sent along with the photograph and a blank properly filled out. These blanks, J1 and J2, can be obtained by writing to the Register of Copyrights, Library of Congress, Washington,

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D. C. The J1 blank is for photographs to be published for sale, and two copies of the photograph must be sent with it. The J2 blank is for photographs not to be reproduced for sale, and one print of the photograph must be sent with it. The package should have the name and address on the outside and be addressed to the Register of Copyrights, Library of Congress, Washington, D. C. A post card notice of copyright will be returned. As soon as the package has been deposited with the postmaster the applicant is permitted to mark copies of the same photograph with the words, "Copyright by," followed by his name. The postmaster forwards these packages free of charge, using a frank label for the purpose. This is the safest way; but, according to the new copyright law, to secure copyright for any picture, all that is now necessary is to publish it with the proper notice of copyright affixed, after which you must "promptly" deposit in the copyright office or in the mail, addressed to the Register of Copyrights, Washington, D. C., "two complete copies of the best edition then published." Your picture is protected from the moment you publish it with the copyright notice.

A Correction

One of those mistakes that happen only about once in four years, with us, appeared in the March issue. The handsome picture on page 129 of that issue, entitled "Hack! Mister?" was credited to Roy J. Sawyer, one of our other valued contributors, instead of to Mr. Remark, the author of the splendid article which it illustrated. Were the picture not so large, we would reproduce it again, giving the correction beneath as we did some five years ago in a like case. Mr. Sawyer was the first to call our attention to the error, but his letter came too late for the correction to be made in our last issue. Our most humble apologies are due both Mr. Sawyer and Mr. Remark for the mistake.

Mr. Turner Here

Just as we go to press we are favored with a visit from Henry H. Turner, President of the Gundlach-Manhattan Optical Company, of Rochester. Mr. Turner reports business as being exceptionally good, and his trip a most enjoyable one; statements that could hardly be otherwise, considering the excellence of his line and his own popularity with the trade in this territory.

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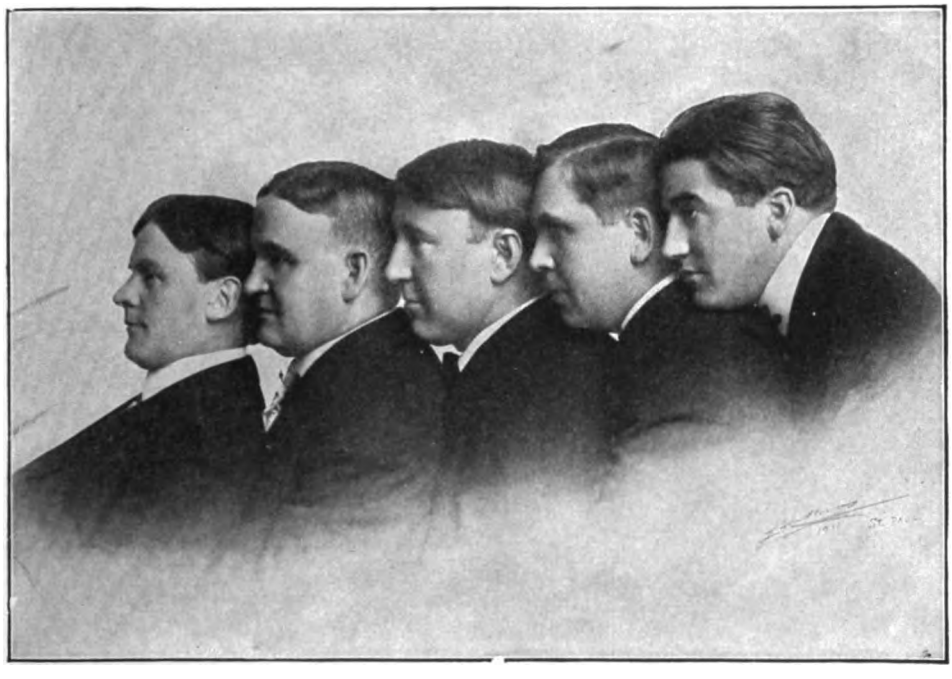
A Word Concerning The National Convention

If it were conclusively shown that the investment of, say, one hundred dollars, in your business, would bring back returns during the year, amounting to several hundred good, hard dollars, dollars that could be banked away, and dollars that would make that year's business shame all previous years, wouldn't you give a few minutes of your time to consider such an investment? Now, honest, wouldn't you?



NATIONAL BOARD OF OFFICERS OF THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA
HARRIS TYREE LARRIMER DOZIER TOWNSEND

It has been proved, time and again, that a visit to the National Convention is productive of such great returns that the investor never ceased being a regular attendant at the National, and his business has yearly shown increased profits, due to the knowledge gained, the new ideas and styles seen, and the contact with big, successful men in the same line of business.

The National Convention for 1911 is planned along bigger and broader lines than ever before. A visit to it will be an education in itself; every day of your stay a red letter day. It may easily be the turning point of your career.

St. Paul is situated in one of the most beautiful parts of our country in summer time, is easily reached by rail, or by steamer over the Great Lakes. Looking at it as merely a necessary vacation is enough, as you will enjoy a trip to St. Paul in July.

First and foremost, that wonderful photographer of international fame, Rudolf Duhrkoop, has been engaged to visit this country, expressly for the National Convention; and, for three days he will show, in a studio improvised in the big lecture hall, just how he gets those beautiful effects we all so admired. He will show us how he "approaches" his subject, how he handles and poses them to get those full-of-action pictures for which he is so celebrated; and,

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as he knows the English language well, he will tell us the how and why of everything he does.

There will be other lectures of unusual instructive value, not the ordinary, meaningless flow of words, but live, vital information pertaining to our business.

The National picture exhibit will, of course, be one of the big things of the year. The very latest ideas in lightings, posings, etc., will be exemplified. It will afford unending material for study, criticism, and discussion. Through it you can compare your own pictures and your own progress with those of the other man.

The entertainments are in good hands. The photographers of the Twin Cities have joined issues to look after that end, and they are the most hospitable fellows on earth.

Our illustration shows the men who are preparing all this for you, the officers of the P. A. of A. for 1911. First, there is G. W. Harris, of Washington, D. C. A man of intense energy, a human dynamo, who has made a success of his own business by using business methods and common sense. Next there is Ben Larrimer, the First Vice-President, serving his second year on the board. An artist in many of those things that appeal to the finer senses, a student of human nature and a broad-gauge man of affairs. He is the "balance wheel" of the board. Then comes Charles F. Townsend, one of the new members, but not new in Association affairs. A hard, enthusiastic worker, determined to make his share a success. L. A. Dozer, the Treasurer, you all know. He figures and figures, saying little, but when he does speak or suggest, his words carry weight. And last, Manly W. Tyree, the new Secretary. A man who is going to make good this year and in future years in the service of the Association. A ready speaker, a sincere photographer, a firm believer in fellowship amongst photographers.

Begin at once, now, today, to plan for the St. Paul Convention the last week in July. Write L. A. Dozer, Bucyrus, Ohio, and send him your application for membership, as below:

Application for Membership in the Photographers' Association of America.

I am owner—part owner—manager—employee of—manufacturer—dealer—representative, and desire membership in the P. A. of A.

Enclosed find $2.00 membership fee and $3.00 dues for 1911. (If check is sent, add 10 cents for collection.)

Name .....

Street .....

City .....

State .....

If you are a member of an affiliated association, send your 1910 membership card or receipt for 1911 dues with $2.00. No membership fee is required and but $2.00 yearly dues. Employees, manufacturers, dealers or their representatives take out associate membership and pay dues only, $2.00 per annum.

THE WOMEN'S FEDERATION

To the Women Photographers, Greeting: From the Officers and Chairman of the Women's Federation of the P. A. of A.

The success of last year's work will not carry us through this year unless we create new interest. We must uphold the feeling of goodfellowship established. It is time to be making exhibition pictures which will add fame to the skillful exhibitor and to our Federation. We ask you to affiliate with us and become a part of our organization. Each woman photographer should resolve firmly to send to St. Paul, next July, the three best prints she has produced during the year, as an encouragement to others, a credit to herself, and for the honor of her profession. Be alive!

Most cordially yours,

MARY CARNELL, President,
1314 Chestnut Street, Philadelphia, Pa.

It is time, fellow-members of the Federation, that you were thinking of that fine exhibit you are going to send for the Women's display at the National this year. In fact, it is time that you were getting it ready.

Now, don't be selfish and not send one. As far as you are individually concerned, that will make our exhibit a failure. Don't be dilatory, thinking there is plenty of time; time flies.

Do your part, each and every one, and the Federation will surpass its splendid exhibit of last year.

Yours fraternally,

BELLE JOHNSON, First Vice-Pres.
Monroe City, Mo.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

EXTRA GROUND GLASS

The modes of making fine ground-glass are endless, and mostly useless. The following from the pages of the *British Journal of Photography* is good. I have not tried a large screen, but the result on a quarter plate was excellent:

Ground-glass is a material very often required by photographers, and also one it is sometimes difficult to get of a really good quality, further than which its price is generally a very long way in advance of its real value. This latter fact will soon be discovered if one wants an extra large sheet, say for a 12x15 focusing screen. It is, however, the easiest thing in the world to make ground-glass of the very finest quality, and the operation is exceedingly rapid. Formerly this was not the case when emery powder was the only abrading material available. For quick cutting, emery made too coarse a grain, and fine flour emery or knife polish acted too slowly. The case is, however, very different with carborundum powder, the finest and smoothest quality of which can be relied on to turn out a first-class focusing screen in a very short time. Beyond the carborundum powder the only thing wanted is a rubber, which consists of a piece of glass fixed with seccotine to a block of wood, which serves as a handle. In use the glass to be ground is wetted, a little powder is thrown upon it, and then the rubber is brought into play. Of course the surface of the rubber becomes ground as well as that of the plate, and when it is in this condition it works at its best. The time required depends on the size of the rubber. Using one about two inches by one a 4x5 screen can be completely and perfectly ground in five minutes or less. For large sheets a bigger rubber is required, and one of the best is a cutting shape fitted with a handle. One that is chipped and useless for trimming purposes will act excellently. A most useful application of the rubber is for grinding the backs of lantern or stereo slides. The former are sometimes, and the latter nearly always, all the better for being on ground-glass, yet transparency plates on ground-glass are not always available. A second cover glass is the usual expedient, but this adds unnecessarily to the weight and thickness of the slide. In view of the possibility of wet and dirt getting on the film side of the plate during the grinding process, it is very advisable to formalin, dry, and varnish the slide before grinding. Put the slide in a printing-frame, glass slide out, and grind with a small rubber. Take care that the slide is well backed up, and that the springs are strong enough to hold it up against the rubber. It can easily be packed up with a few spare or spoilt plates, or with cardboard, and then there will be no fear of the plate giving from the rubber, and so letting wet in under the frame rebate. When ground the glass is cleaned while still in the frame, and on removal the film side should be found to be perfectly clean.

PRINTING ON SILK

The following method by H. T. Chippindall has the endorsement of *Photography*, from whose pages it is taken:

Although the title of this article is "Printing on Silk," it must not be supposed that silk is the only fabric with which the process can be carried out. Satin, or any other fine material, will serve the purpose almost equally well, although for the most attractive results the amateur is strongly advised to use silk, the best color for this purpose being either white or cream.

The chemicals required are only four in number, and a comparatively small amount of each will suffice, so that the process can be tried without any very great outlay.

A dram of dextrine is mixed with two ounces of water and allowed to dissolve. It is then made up to four ounces with boiling water, and, when cold, a solution of one dram of ammonium chloride in two ounces of water is added. As this mixture does not

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keep well it should be used as soon as possible after being made up.

The silk is soaked in the liquid until it is thoroughly saturated, which should take about four or five minutes, and it is then hung up to dry, suspending it, tightly stretched, from its two top corners. The fabric when "salted," as this operation is termed, will keep indefinitely. All these operations can be done in full daylight.

The next stage is the application of the sensitizer, for which purpose the two following solutions must be made up and then mixed:

A: Silver nitrate .....120 grains
Water . . .. 1 ounce
B: Citric acid ..... 50 grains
Water . . .. 1 ounce

The mixture is spread evenly over the silk with a soft camel-hair brush. There must be no metal in the mounting of the brush that is used.

Particular care must be taken to see that no particle of the surface of the silk is left uncovered. The best way to ensure this is to brush the liquid over the silk, first in one direction, and then crosswise. The process of sensitizing must be done in a weak artificial light, such as at night by ordinary gas or lamplight or in the very feeblest daylight.

The silk is then again fastened up and allowed to dry, but as it is now sensitive to light the drying must be done in the dark. It is ready for printing as soon as it is dry, and as it does not keep well in the sensitive condition, it should be used up within a few days at the most.

The printing, which is done by daylight, is carried out in the same way as for ordinary printing-out paper, except that the silk should be printed a little darker than usual. It will be found convenient to gum the edges slightly, and then to fix the silk on to a stiff piece of paper before putting it into the printing frame, as if this precaution is not adopted there is a tendency for the silk to slip or crease when it is being examined. The silk must be handled carefully while in the printing frame for this reason, but apart from that, there is no particular difficulty. The paper can be taken off again when the printing is finished.

Prints on the silk are toned, fixed, and washed in the same way as ordinary silver prints. The washing should be thorough, and before the prints are quite dry, they should be ironed out to remove all creases.

HIGH-POWER PHOTO-MICROGRAPHY

The following abstract is reported in the *Amateur Photographer*, from a lecture by Max Poser, before the Royal Photographic Society, London:

Mr. Poser devoted the greater part of his address to the subject of illumination. He advised the use of an arc lamp with continuous current—alternating current lacking sufficient steadiness; but, failing this, limelight, incandescent gaslight, or an oil lamp was practicable even for high-power work. In using the arc lamp the great desideratum was to have the image of the crater projected on the sub-stage condenser sufficiently large to fill its entire aperture. To obtain this result it was necessary either to ensure that the carbons of the arc lamp were rectangular to each other, or else to bring both carbons approximately into a line, but inclined to such an extent that the full crater was drawn to the front toward the microscope.

Turning to the illumination of special subjects, he said that in the case of diatoms no definite rule could be given. They were of a transparent substance, and required generally an illuminating cone smaller than the aperture of the objective. Some of them had to be illuminated with a very oblique beam of light; in the case of others, no illumination with opaque light should be attempted, their structure demanding axial illumination. In illuminating bacteria or fine-fibred structure, only axial light should be used, and the illuminating cone chosen should be the largest possible. Such stained preparations should be photographed with a light passed through suitable color-filters so as to secure the fullest contrast. These filters were best chosen by testing the staining fluid with a hand spectroscope.

In order to obtain higher resolving powers than could be furnished by a numerical aperture of 1.40, Mr. Poser pointed out the advantages of using a beam of light for illuminating purposes belonging to the shortest wave-length possible. By using light of short wave-length the same effect was obtained, so far as the resolving power of the microscope was concerned, as by increasing the numerical aperture of the objective. For this reason microscope objectives had been constructed for ultra-violet light. This light,

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of course, could not be passed through glass lenses. Even a cover-glass would block it as effectively as a sheet of metal would block ordinary light. Consequently the whole optical system had to be made of quartz, and the microscope objectives of fused quartz. For approximate focusing, the ultra-violet light was made visible by means of uranium glass, which rendered it fluorescent.

Mr. Poser concluded with an exhibition of some of his own photomicrographs of diatoms and medical specimens. In some cases the magnification in the lantern was nine thousand diameters, and on the screen probably over two hundred thousand.

BRUSHES FOR GUM WORK

A writer, G. E. L., in the *Amateur Photographer,* gives an excellent tip for the making of the right kind of brush for coating paper with gum and pigment. He says: If a thin coating only is being applied, then an ordinary flat hog-hair varnish brush will be found to work very well, but if a thick coating is being used, a stiffer brush is required. The "flow" of the gum as it is spread will indicate whether the brush is sufficiently stiff; if not, it can be made so by shortening the bristles. The retailer of brushes will probably raise all kinds of difficulties about getting the manufacturer to shorten them, and will very likely say it can be easily done with a pair of scissors. Such a point as scissors will produce is, however, of no use for gum coating.

It was only after a good deal of experimenting in tying up the bristles, soldering tin round the base of them, and spoiling of brushes generally, that the author hit upon the following method of shortening the bristles, which is both easy and entirely satisfactory.

Take some ordinary glue and melt in a glue-pot with sufficient water to make it a fairly stiff consistency. Dip the varnish brush into this, and work the glue well into the bristles of the brush. Withdraw the brush, and, seeing that the bristles are lying straight and in their proper place, lay the brush aside for twenty-four hours for the glue to thoroughly set. Now, take it to a grindstone which is perfectly dry, and on this grind down the bristles to the length required. It is best to grind only in the direction of the lay of the bristles, and to round them off from side to side, and to keep the end straight, but it can be made of any shape and length (that the original shape and length will allow) that is required. It now only remains to soak the brush in cold water over-night, and in the morning all the glue can be worked out of it with the aid of plenty of cold water and a slab or palette. Do not use hot water, and do not leave more than the end of the brush (say half the exposed bristles) in water when soaking out the glue, or it may be found to have softened the cement that holds the bristles in the ferrule, and cause them, later on, to become loose and fall out. When the brush is dry it will be found that a most perfect tip has been put upon it, and that it has been made much stiffer, according to the amount ground off.

DEVELOPERS FOR THE TROPICS

Messrs. Lumiere and Seyewitz have contributed another of their valuable studies to the photographic world, one dealing with the problem of providing a developer that shall give good results without fog at a temperature as high as one hundred and four degrees Fahrenheit. They find that only one developer is perfect in this respect, namely, amidol. Their formula is:

Diamidophenol	5 gms.	44 grains
Soda sulphite (anhydrous)	30 gms.	260 grains
Ammonium sulphate cryst	250 gms.	5 ounces
Potass. bromide.	3 gms.	27 grains
Water	1,000 ccs.	20 ounces

In place of the five ounces of ammonium sulphate, three ounces of anhydrous soda sulphate may be used.

This developer, used at a temperature of one hundred to one hundred and four degrees Fahrenheit, gives excellent negatives in about three minutes' time of development.

They also state that good results are possible with metoquinone metol-hydrochinone and pyro, made according to the following formulæ:

METAQUINONE

Metoquinone	5 gms.	44 grains
Soda sulphite (anhydrous)	200 gms.	4 ounces
Potass. bromide.	2.5 gms.	22 grains
Water	1,000 ccs.	20 ounces

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METOL-HYDROQUINONE

Metol	1.5 gm.	13 grains
Hydroquinone	1.5 gm.	13 grains
Soda sulphite (anhydrous)	200 gms.	4 ounces
Soda carbonate (anhydrous)	10 gms.	88 grains
Potass. bromide	2.5 gms.	22 grains
Water	1,000 ccs.	20 ounces

PYRO

Pyro	10 gms.	88 grains
Soda sulphite (anhydrous)	25 gms.	½ ounce
Soda carbonate (anhydrous)	50 gms.	1 ounce
Potass. bromide, 10 p.c. sol.	30 ccs.	5 drams
Water	1,000 ccs.	20 ounces

This developer will not keep very long, and rapidly discolors during development. For a formula which can be kept at hand for use, the following two solutions should be used:

A: Pyro	30 gms.	260 grains
Soda sulphite liquor	10 ccs.	1½ drams
Water	1,000 ccs.	20 ounces
B: Soda carbonate (anhydrous)	75 gms.	1½ ounces
Soda sulphite (anhydrous)	37 gms.	160 grains
Potass. bromide, 10 p.c. sol.	45 ccs.	7½ drams
Water	1,000 ccs.	20 ounces

To prepare the working developer, one part of A is mixed with two parts of B.

SCUM MARKINGS

Scum markings on plates have received a good deal of attention in our correspondence columns of late, but in these cases markings produced in development have generally been referred to. Several times of late we have had complaints of another kind of scum mark, which has proved to be due to the use of hard water for washing purposes. Alkalies precipitate various insoluble substances from hard water, and therefore when a plate, the film of which is filled with alkaline developer, is put into tap water, some of these precipitates are found in the gelatine. Very likely some are also found when a developed, but unwashed plate, is immersed in a plain fixing-bath, for such a bath is invariably made with tap water, which is usually hard. One of the advantages of the acid fixing-bath is that it, if made from a suitable formula, more or less prevents such precipitation, but the bath can never contain a strong acid, and therefore it is not always effectual. A final acid clearing-bath is therefore always advisable, and in the cases we have referred to above a clearing-bath has always been effective. In bad cases a five per cent hydrochloric acid bath is advisable, especially when the scum has not been discovered until the plate is dry. Gelatine plates will stand the prolonged application of such a bath quite safely, but if treated before drying a weaker bath will generally be quite effective. Even citric acid will serve in such a case, and few clearing-baths are more effective than the well-known mixture of chrome alum and citric acid. But the mixed bath will not keep well, and so hydrochloric acid is generally more convenient. Sulphuric acid in the same strength will do as well, and will do no damage to the films if allowed to cool down before use. Nitric acid, however, should not be used in any circumstances, and neither citric nor acetic acid are advisable excepting when used in conjunction with alum, which serves to counteract their softening effect on the gelatine.—*British Journal of Photography.*

LUMIERE'S NEW REDUCER

This, like the persulphate and Namias' acid permanganate reducer, attacks the heavier deposits in preference to the shadow detail. It is said to lack some of the disadvantages of these other reducers. The formula is:

Water .....12 ounces
Sulphuric acid ..... 4 drams
Quinone .....1 to 10 drams

The reduction being sufficient, the plate is immersed in a twenty per cent solution of bisulphite of soda, this stopping the action of the reducer.

REMOVING FERRICYANIDE STAINS

A Florida correspondent has several negatives that have been reduced by the use of the ordinary Farmer's reducer; and, owing to too long application of the solution, a yellow stain has been left. This he wishes to remove. All that is necessary is to immerse the negatives in a weak solution of ammonium sulphocyanide, about five grains to the ounce of water, and the stains will disappear.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

A CONTROLABLE INTENSIFIER

Another correspondent wants to know if there is an intensifier that is under control as to the amount of density created; and, if possible, one that will not unduly build up any slight fog or veiling that the negative may have. The best intensifier for his purpose is, perhaps, one introduced by Wellington, of England, some years ago. The process has been described as follows: In one ounce of distilled water dissolve fifty grains of silver nitrate, and then add crystals of ammonium sulphocyanide until the precipitate first formed is nearly, but not quite dissolved. This will require about one hundred and twenty grains of the sulphocyanide, and form a stock solution that will keep for a long time. To prepare the working solution, take fifty minims of the stock solution, and make up to one ounce with water, producing a milky solution; then add a ten per cent solution of hypo until it only just becomes clear. This is best achieved by retaining a little of the dilute silver in another glass to be added afterward should the line be over-stepped in adding the hypo solution. Next, add twelve grains of sodium sulphite, two grains of ammonium bromide, and three grains of pyro. Lastly, just at the moment before applying to the plate, add one-half drachm of ten per cent ammonia. The negative should preferably have been subjected to either alum or formaline hardening, as otherwise frilling might occur. As the intensifier contains hypo, the perfect elimination of the hypo in the film is not important. The dish used should be perfectly clean, as otherwise the silver will deposit itself on the sides of the dish instead of on the negative. Some two or three minutes will elapse before this intensifier begins to work, but once started, increase in density goes on steadily. If, at the end of five minutes, it has not started to act, pour off the solution and add another half drachm of the ammonia. This intensifier alters the color of the negative but slightly, if at all; when dry, the negative is much denser than it appears when wet, its action may be stopped at any point by removing and washing; and, if carried too far, any excess may be removed by means of the ordinary hypo and ferricyanide reducer.

MAKING QUICK PROOFS

Our Ohio correspondent is advised that he can make proofs from his developed, but unfixed, negatives, by squeegeeing a sheet of wet bromide paper into contact with the wet film, and giving an exposure several times longer than would be required under ordinary conditions and using the paper dry. If the developer is well rinsed out of the film, the exposure to artificial light necessary to make a print, will have no injurious effect upon the negative, which is, of course, later fixed and washed as usual.

OPALINES

A Texas subscriber wants to know how he can affix solio prints to glass in the manner used by the producers of the small pictures sold at some of the cheaper stores. His idea is to thus use up a large supply of cleaned negative glasses. The prints must first be thoroughly hardened by using an alum or formaline bath, and then dried. Then prepare a gelatine solution by dissolving twenty grains of gelatine in each ounce of water. This is done by allowing the requisite amount of gelatine to swell in the water for about an hour, and then bringing it to a temperature of about one hundred and forty degrees by means of a water bath. While still warm, immerse the print in it for ten minutes, meanwhile placing the glass in a dish of lukewarm water. Remove the glass, lay it on a level table, pour on enough of the gelatine solution to just cover as thin as possible, assisting the distribution with a warm glass rod; place the gelatinized print down upon it, and with a rather light touch, use a

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squeegee just enough to bring them into good contact and drive out any superfluous gelatine solution or air bubbles. Any superfluous gelatine solution is afterward removed with a sponge dipped in hot water. If the print is desired smaller than the glass, mount it in the proper position, remove the superfluous gelatine solution around the edge when dry, and then give the whole a coat of a good quality of carriage paint. This gives a handsome mat or border effect in harmony with the glazed appearance of the picture. A neat frame completes the work.

STRIPPING FILMS FROM GLASS PLATES

The dry negative is soaked for ten minutes, longer if it has had a hardening treatment, in:

Caustic soda, concentrated solution ..... 7 drachms
Formalin . ..... 4 drachms
Water . .....25 ounces

Then, without rinsing, place in:

Dilute hydrochloric acid. 1 ounce
Water . .....20 ounces

It may be necessary to cut around the edge of the film near the margin, but, perhaps, it can be started at the edge, by using the finger to gently roll it back. If the film is on a broken negative, turn it over in water and rub the back for pieces of broken glass. To put it again on glass, use a piece a size larger than the original negative, as it will be found to have enlarged somewhat. An old negative that has had the image taken out with a reducer is the best, as the detached film will adhere to its gelatine surface better than to a clear piece of glass. Floating the detached film onto a new support should be done under water, the operation being performed in a large, deep tray.

IMPROVING BROMIDE PRINTS

One of our readers writes to say that he has accumulated, from time to time, a large number of flat, greenish-grey bromide enlargements, the result of working at night and using too much bromide or an overworked developer. He remembers having seen a method of toning such prints to make them presentable. What he wants is the following, I think: The prints must first be well washed to remove all trace of hypo. Then dissolve one hundred grains of ammonium sulphocyanide in five ounces of water, and ten grains of cold chloride in five ounces of water, and lastly add the gold solution to the sulphocyanide one, shaking continuously. Tone until the desired color is obtained, then wash as usual.

BROMIDE PAPER NEGATIVES

For making enlarged negatives on bromide paper, an Illinois correspondent wants a formula for a solution that will make thin bromide paper transparent. An old worker whom we have consulted as to the best method, advises the following:

Rectified turpentine .....2 ounces
Powdered resin .....5 drachms
Gum Elemi .....5 drachms
Paraffine wax .....2 drachms

Dissolve these by gentle heat, preferably in a sand or water bath to avoid danger of the solution catching fire; finally adding one and one-half more ounces of the rectified turpentine. This mixture is applied with a wad of cotton until the paper is well saturated. Our informant advises that oiling the paper and removing the surplus with blotters and a hot iron, as so often advised, is not satisfactory, the negatives going mottled later. Simply applying wax has a like disadvantage, the wax seeming to crystalize into white patches after the negatives have been kept for some time, causing uneven printing.

ACID BISULPHITE LYE

A reader in Ohio complains that he cannot obtain acid bisulphite lye, called for in a formula which he clipped from one of the magazines some months ago. It should be obtainable through a druggist if he will but go to the trouble of ordering it from his wholesaler, but a substitute can be made up as follows: Dissolve ten ounces of sodium sulphite in twenty ounces of warm distilled water, and when cool, add one and three-fourths ounces of pure sulphuric acid. The resultant solution will contain an amount of acid bisulphite corresponding to eleven fluid ounces of acid bisulphite lye. In other words, one will have to use this substitute at the rate of about two ounces for every ounce called for of the acid bisulphite lye of the formula.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

ALASKA ALBUM No. 1

Alaska Album No. 1, on its way to Mr. Winchell, passed through our hands, and we want to say a few words of praise for it. Although it contains but twenty prints, the work of five members, it is a model of what our circulating albums should be, being small, compact, and yet full of interest. It gives one a most intimate knowledge of Alaska to run through its pages, makes the recipient wish to exchange a few prints with the makers of those it contains, and is just the kind of a collection that the recipient would enjoy showing to his friends. Too many of our Album Directors feel that they must have a large number of prints from as many members as possible. I think that idea can be carried too far. Too many prints are liable to pall and too bulky and album sometimes involves an expenditure for postage that only the most enthusiastic recipients may overlook. A second Alaskan album is well under way, but mining activities in our northern territory is occupying so much attention at the moment that it may be delayed, Mr. Hunt writes.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4954 Washington Ave., Chicago, Ill.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 200 South Marion St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

NEW MEMBERS.

2841—James R. Reynolds, Richville, Minn. Class 3.

2842—George W. Campbell, Box 681, Okolona, Miss. Class 2.

2843—J. H. Krause, 44 East Taylor St., Huntington, Ind. Class 3.

2844—Walter F. Slusser, Fort Fremont, S. C. 3¼x5½, developing paper, of U. S. A. military views; for historical views. Post cards only. Class 1.

2845—Jasper Hendricks, R. F. D. No. 1, Rugby, N. Dak. Class 2.

2846—John Sillak, Box 546, Medicine Hat, Alberta, Canada. Class 2.

2847—Nicholas Soon, Box 1038, Honolulu, T. H. Class 2.

2848—L. E. Spadina, 2455 Sacramento St., San Francisco, Cal. Class 2.

2849—Harry G. Beebe, 420 Huron St., South Haven, Mich.
4x5, developing paper, of general views; for the same. Class 1.

2850—Chas. H. Grandle, Canning, S. Dak. Class 2.

2851—Fred L. Chalfant, Box 38, Linden Heights, Ohio.
2½x4¼ and 3¼x5½, developing papers, of local scenery and buildings, good variety; for scenery of all kinds, and prominent buildings. Post cards only. Class 1.

2852—H. A. Kelso, R. F. D. No. 3, Hart, Mich. 5x7 and 8x10, also post cards, developing papers, of lake, orchard, sand dunes, fruit, and general view; for landscape, comic, and wild animals. Post cards only. Class 1.

2853—J. R. Holmes, Box 43, Louisville, Miss. 5x7, and smaller, developing paper, of Southern views; for general views. Class 1.

2854—W. M. Winton, State Normal School, Edmond, Okla.
4x5 and 2¼x3¼, developing paper, of animals, birds, and geological views; for the same. Desire to exchange only natural history pictures. Class 1.

2855—Walter B. Hambright, 2225 Jefferson St., Harrisburg, Pa. Class 2.

2856—G. C. Alting, 729 Englewood Ave., Chicago, Ill. Class 2.

2857—I. Kuhn, 562 W. 164th St., New York, N. Y.
1¾x4¼, stereos, of view of New York, also landscapes; for views. Desire to exchange only, stereos, 1¾x4¼, glass. Class 1.

2858—H. M. Sutton, 1800 N. Jefferson St., Dallas, Texas. Class 2.

2859—Charles August Kilwinski, Pacific Station, U. S. S. "Vicksburg," care Postmaster, New York City.
4x5 and post cards, developing papers, of foreign views in general and naval (U. S. N.); for artistic views, especially of natural studies. Class 1.

2860—W. F. Hudson, Sheffield, Iowa.
4x5, 3¼x5½, and 5x7, various papers, of scenery; for the same, especially of mountains and some of the famous buildings. Class 1.

2861—Chas. Lundberg, 4431 Milgate St., E. E., Pittsburg, Pa.
5x7, developing paper, of scenic views; for scenic and marine views, also bird and animal pictures. Class 1.

2862—J. Peter Naab, via Theodore, Fruitland, Utah. Class 2.

2863—Godfrey Loeppler, 635 Chestnut St., Quincy, Ill.
Post cards. Class 1.

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2864—C. A. Crawford, Box 233, Phillipston, Pa. Class 3.

2865—Joseph Decker, Rhineland, Texas. Class 3.

2866—M. Y. O'Brien, Creve Coeur, Mo.
4x5, various papers, of various views, including landscapes, churches, schools, portraits, etc.; for the same. Desire to exchange only prints and stereoptican views. Class 1.

2867—Miner W. Tuttle, 616 West Wabash Ave., Crawfordsville, Ind. Class 3.

2868—E. F. Gerth, 128 First St., care Berger Bros., Portland, Ore.
4x5 to 6½x8½, various papers, of scenery and views of general interest; for unmounted prints and post cards. Class 1.

2869—R. E. Cochran, Lock Box 95, Morrison, Ill. Class 3.

2870—Miss Grace Holmes, Sanatorium, Wales, Wis. Class 2.

2871—Rene Nahl, 3526 Partalozzi St., St. Louis, Mo. Class 2.

2872—Jos. W. Lindsay, 604½ Spruce St., New Castle, Pa.
4x5, developing, of scenery and general outdoor views; for the same. Class 1.

2873—Vernon L. Davies, 906 N. 3d Ave., Maywood, Ill.
5x7, developing paper, of general views; for the same. Class 1.

2874—Dr. J. C. Elsom, 1614 Jefferson St., Madison, Wis. Class 2.

2875—Rev. Frank F. W. Greene, 312 East 4th St., Aberdeen, Wash.
5x7, 4x5, and 3¼x5½, developing papers, of all sorts of views, both land and marine; for anything pretty, marine preferred. Class 1.

2876—Frank Grinnell, Antrim, Pa.
3¼x5½, developing paper, of bituminous coal mines, inside workings (flashlights) and general views; for general views. Class 1.

2877—C. E. Johnston, Box 168, Warsaw, Mo.
3¼x5½, post cards, developing paper, of scenery; for the same. Class 1.

2878—Gordon Brown, Box 16, Elrod, S. Dak. Class 2.

2879—T. B. Haynes, R. F. D. No. 1, Creston, Mont.
3¼x5½ and post cards, various papers, of general landscape views and natural studies; for any work of fair quality, historical views given a little preference. Class 1.

2880—J. H. Helsley, No. 8 Kentucky St., Wheeling, W. Va.
5x7, various papers, of Ohio River, flood and scenery views; for any good subjects. Post cards or prints. Class 1.

2881—Lillian Keleher, Lock Box 500, Marcus, Iowa.
5x7 and smaller, developing and printing-out papers, of child studies, general views, and some portraits; for child studies, mountain, water, and landscapes. Class 1.

2882—Henry C. Addison, 2005 N. 5th St., Kansas City, Kans.
3¼x4¼, and 3¼x5½, developing paper, of mountain views, and Giant Forest views, and Sequoia National Park. Post cards only. Class 1.

2883—Sid J. Sicotte, Box 417, Eveleth, Minn.
3¼x5½, various papers, of Minnesota scenes; for prints and post cards. Class 1.

2884—F. C. Driffields, Unga, Alaska. Class 2.

2885—George Macaulay, 167 Allen St., New Bedford, Mass. Class 2.

2886—Sadie L. George, 1355 N. Water St., Wichita, Kans. Class 2.

2887—W. W. Lyman, Aetna, N. Dak.
3¼x4¼, developing paper, of portraits and scenery; for the same. Class 1.

2888—H. A. Wetter, Lock Box 781, Clarion, Iowa.
3¼x5½ and 2¼x3½, various papers, of mostly landscapes, all exterior work; for anything, either interior, exterior or portraits. Class 1.

2889—O. E. Rupert, Truemans, Pa. Class 3.

2890—W. H. Klinedinst, 30 Park Place, Morristown, N. J.
From cabinets to 8x10, developing paper, of portraits and landscapes; for portraits. Class 1.

2891—M. L. Myers, Odd Fellows Bldg., Sedalia, Mo.
4x5 and post cards, various papers, of photos, children and local scenery. Class 1.

2892—George W. Meek, R. F. D. No. 1, Murphy, Ore. Class 2.

RENEWALS.

1985—J. H. C. Sorensen, Route 1, Box 112, Gresham, Ore.
Stereos, sample exchange of not more than six unmounted stereos; only good work accepted and sent of anything of interest. Class 1.

2042X—Mrs. F. D. Hathorne, Cushing, Maine.
Post cards. Class 1.

220?—H. H. Wiles, Cedarhurst, Colo. Class 3.

2232—J. L. Park, 7939 Susquehanna St., Pittsburg, Pa.
Stereos on 5x7 glass plates. Class 1.

2251—E. S. Harvey, Lebanon, Ind.
4x5 to 8x10, developing paper, of pictorial landscapes and commercial views; for the same. Only first-class work accepted. Class 1.

2285X—C. A. Holman, Dredge 83, Gatun, Canal Zone, Panama.
Post cards on developing paper, of scenes about the Canal Zone, workings, natives, etc.; for anything of interest. Class 1.

2309—A. A. Richardson, Bemidji, Minn.
Up to 5x16, developing paper, of Indians and logging views; for genre, decollette, semi-nude, beautiful water and other scenery. Class 1.

2375—Wm. F. Smith, San Jose, Ill. Class 2.

241?X—A. J. Latson, R. F. D. No. 3, Rocky Ford, Colo. Class 2.

2419—H. C. Boesche, Van Wert, Ohio. Class 2.

2442—C. Willard Evans, 187 Fremont St., San Francisco, Cal.
2¼x3¼, 3¼x4¼, 4x5, and 5x7, developing paper, of landscapes principally, some yachting and harbor scenes; for anything of interest. Class 1.

2461—Miss Margaret Seaman, R. F. D. No. 2, Box 41, Utica, Neb. Class 2.

2465—Richard Russell, Box 194, Hayward, Cal.
Lantern slides, post cards, and prints up to 6½x8½, various papers, of interesting views; for good, clear cards or for soft and pretty prints. Only careful work accepted. Class 1.

2478—J. F. Horstman, R. F. D. No. 1, Box 52, Aptos, Cal. Class 2.

2659X—A. E. Willcutt, Swift River, Mass.
Post cards. Class 1.

2797X—L. R. Meredith, Box 21, Waynesboro, Tenn.
4x5, prints and post cards, developing papers, of landscapes, rivers, etc., views of historical value. Only first-class work accepted. Class 1.

CHANGES OF ADDRESS.

1731—E. C. Huntington, 1625 Hewett Ave., Hamline, St. Paul, Minn.
(Was Windom, Minn.)

1908X—Thomas E. Guerin, 3854 N. Darien St., Philadelphia, Pa.
(Was 3624 N. 6th St., Philadelphia, Pa.)

2151X—Pres Fidler, Bray, Cal.
(Was Weed, Cal.)

2347—Mrs. Harold Jones, 236 E. Main St., Bozeman, Mont.
(Was Dodge City, Kan.)

2499—Andrew Schoeppler, Sub-station 23, Detroit, Mich.
(Was 407 Dubois St.)

2536—Richard T. Lefebvre, Fort McCoy, Fla.
(Was Ocala, Fla.)

2758—Robt. J. N. Parker, East Hampton, Long Island, N. Y.
(Was Avalon, Va.)

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

REPORTED BY WILLIAM WOLFF

The King Studio in Los Angeles was sold out at auction March thirtieth.

F. O. Haussler closed his Schumacher studio in Los Angeles, and has leased his home studio in the same town to Witzel & Matzine.

Met J. B. James of Bakersfield in Los Angeles the last week in March. He was on his way to San Bernardino, where he has two studios in charge of Ollie Lussier.

Frank Aston of San Luis Obispo has made extensive changes in the front of his ground floor studio, putting in new hard wood paneling. The reception room has been enlarged in order to better accommodate the large groups that have lately been a feature of his work.

H. E. Schwichtenberg of Pomona has the most interesting and inviting reception room of all the Southern studios I have visited. The main feature is a complete set of hand carved furniture from China, a set including many massive pieces. The furnishings would be a credit to any studio on the Coast.

The following clipping, from the Pomona morning paper of March thirtieth, may interest:

"Mr. and Mrs. H. E. Schwichtenberg entertained, last evening, Mr. William Wolff of San Franciso, special representative of Hirsch & Kaiser, wholesale photograph supply house of that city, and E. M. St. Claire, Pacific Coast demonstrator for the Ansco Company of Binghamton, New York. A musical program concluding with an old-fashioned Dutch lunch, rounded out the evening to the pleasure of their guests."

THANKS

Messrs. James H. Smith & Sons Company desire to thank the photographers of the United States and Canada, and particularly readers of CAMERA CRAFT, for their substantial appreciation of the unequalled merits of their goods bearing the Victor label. The sales on Victor for the first three months of 1911 show a fifty-six per cent increase over the sales for the corresponding three months of 1910. The reason for this increase is undoubtedly the firm's policy, one which demands that every consumer of Victor products shall enjoy every merit claimed in their advertising statements, full weight, and superlative quality. If the reader is not familiar with Victor flashlight specialties, Victor flash powder, and Victor intensifier, he should write for circulars of the above. to Messrs. James H. Smith & Sons Company, 725 E. 39th Street, Chicago, Illinois.

BE SURE AND SEND FOR IT

We reproduce herewith the cover of a handsome new prospectus of the Complete Photographic Instruction and Reference Library. It contains a fine double page plate

showing the portraits of fifty-two leading American photographers, reproductions of photographs that have brought their makers from ten to five hundred dollars, and numerous illustrations and sample pages from

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the library. Do not neglect the opportunity of securing a copy. Do not put it off until too late; turn to the advertisement in the front of the magazine, clip the coupon and send at once before the supply is exhausted. The authors have tried to put into this set of books, and you can judge their success, only facts that are of vital value to every owner of a camera, be he amateur or professional. It is all made plain and simple; a child can understand it; everything is arranged in a logical manner, and the principles and processes so orderly marshaled the advanced worker can at once turn to it and locate the many short cuts and reference features that are needed every day in his work.

THE CENTRAL DRY PLATE COMPANY OPENS BRANCHES

The Central Dry Plate Company has recently opened offices at 54 and 56 Wabash Avenue, Chicago, the genial F. M. Whipple being in charge. New York offices will be opened very shortly. According to a recent letter, the firm has all the business it can take care of at the present, despite recent increase in facilities. It has been trying for some time to get enough stock ahead to allow them to close down long enough to enlarge the drying room, but without much success. By the time this reaches the eyes of our readers they expect to have their several new lines of plates ready for the market. They have, up to the present, made only their "Comet" brand, which has met with universal approval wherever tried. It is a clean working, high speed plate, easy of manipulation, and at prices most inviting. If there is not yet a dealer in your locality, correspond with them; they will make a proposition that will interest you. Their advertisement appears in our front advertising section.

SPECIAL REDUCED RATE

The Illinois College of Photography is running a special reduced rate for tuition for a limited time, and we would advise such of our readers as contemplate the taking of photographic instruction of the high class offered, to at once communicate with them. The summer classes are already considerably augmented over their usual size, and the offer is to be withdrawn at an early date. A large class, as a moment's thought will show, spells for greater interest and a more exhaustive treatment of the subjects taken up, and for that reason, if for no other, an effort should be made to become a member of this summer class.

THE 1911 SENECA HAND-BOOK

The cut herewith shows the cover, minus the handsome lithograph colors, of the new Seneca catalogue for 1911. In it will be

found improvements and new features that will interest every camera user. The Seneca reversible back camera is shown with the new revolving back feature, while the new focal plane shutter, another Seneca idea, will appeal to all interested in speed work. The Filmett camera has been still further improved by the addition of a plate, easily removed when desired, to the back. All the Seneca View and Camera City outfits are now equipped with the new jarless back, making it possible to insert the plate-holder without any danger of jarring the camera. And this brings us, naturally, to the new Simplex plate-holder, about the first radical improvement in plate-holders that we have had in many years. It does away, entirely, with the handles on the ends of the slides, a feature that at once removes all the annoyance of broken slides and handles, while

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giving increased protection from light by means of the greater depth of shoulder allowed for the light trap therein. The book is sent free on request. If your dealer cannot supply you with a copy, address, Seneca Camera Manufacturing Company, Rochester, N. Y.

REMOVAL NOTICE

The Taylor-Hobson Company has removed from the seventeenth floor to the fifteenth floor of the St. James Building, at Broadway and 26th Street, New York. The firm has occupied this building continually since they opened the American branch nearly nine years ago, but this is the fourth move that they have found it necessary to make in order to meet the growth of their business. The new offices are much more spacious and convenient in every way.

It is interesting to hear that the sale of Cooke anastigmat lenses this year is already far in advance of any previous year during the same period. The new Cooke-Telar lenses, moreover, have "caught on" to such an extent that it is a difficult matter to obtain them fast enough from abroad. One firm of photographic dealers remarked recently, that never before had they received so many inquiries about a new lens as they now receive about the Cooke-Telar.

THE P. & S. SEMI-ACHROMATIC LENS

Amongst our new advertisements this month will be found one of the Pinkham & Smith Company, advertising their Semi-Achromatic Lens. This lens, or its forerunner, was originally made in 1897, to meet the requirements of a leader, at that time, in pictorial photography. It has been used, since that time, and recommended and endorsed by, such men as Stieglitz, Coburn, White, Steichen, Goldensky, and the like. The results obtainable with this lens are pictorial, pleasing, and just what the artist photographer wants in his work. We could go on filling space in an attempt to catalogue its merits as a tool in the hands of artistic workers, but we would prefer to have you send to the manufacturers for a handsome circular showing examples of work; or, if you can do so, call and see samples of work and the lenses themselves at Hirsch & Kaiser's, the local agents for the P. & S. lens. Address, Pinkham & Smith, 288-290 Boylston Street, Boston, Massachusetts.

MITCHELL'S "SNAP" DEVELOPER

Our Philadelphia readers, and a large number of our widely scattered ones, do not need to have their attention called to the merits of a developer put out by Charles L. Mitchell, M. D., the well known maker of developers that have given extreme satisfaction to so many of the best workers for years. On another page will be found an advertisement of "Snap," a developer that should be given a trial by every one of our readers using a developer for plates, films, or papers. It is hardly consistent for us to use space telling of its merits when a sample package will be sent for thirteen cents. A trial will be much more convincing than any statement that we can make. Send the stamps to Charles L. Mitchell, M. D., 1016-1018 Cherry Street, Philadelphia, Pennsylvania. You may get acquainted with a developer that is just what you have been looking for; others have.

SHUTTER CERTAINTY

The camera user, be he amateur or professional, who is at all interested in being absolutely certain as to the actual duration of his exposures, will welcome the new shutter just on the market by the X L Manufacturing Company. The present form of popular shutters depends upon a valve to control the duration of the exposure. Set at any certain speed, say the fiftieth of a second, the exposure will be much longer at one temperature than at another. If the lens be tilted from the horizontal, the speed is retarded to an extent that is surprising to one who has never looked for the variation so caused. And every user of a valve-controlled shutter knows the retarding effect of a very little dust.

The X L Universal Shutter is built on a principle never before employed in shutter construction. A train of wheels, not valves, control the action. The position of the shutter, the temperature, whether hot or cold, not even dust, has any effect upon its speed. It gives the speed indicated on the dial under all conditions. The dial can be set to any exposure up to one-five-hundredths of a second, and also time and bulb. It is a four-blade shutter, giving even illumination and the highest light efficiency. It is automatic, absolutely accurate, and

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the retarding mechanism being connected directly with the motive power, makes it steady, direct and positive in action. Write for full information and prices, addressing, X L Manufacturing Company, Rochester, N. Y.

THE NEW PREMO CATALOGUE

Do not fail to secure a copy of this elegant new catalogue. Your dealer will have them by the time this reaches you, but if not, or if he is out of them, write directly to the Rochester Optical Division, Eastman Kodak Company, Rochester, New York, and ask for a copy. It is a book that will delight every user of a camera; in fact, would delight anybody interested in pictures, and that includes about everybody. All the new Premo goods are listed and explained, together with the improvements in the regular lines. The pictures used as illustrations are some of the best reproductions it has ever been our good fortune to enjoy, and we can assure our readers that they are missing a treat until they have secured a copy.

MR. HALL VISITS THIS COUNTRY

H. W. Hall, managing partner of Wellington & Ward, Elstree, England, made a flying trip to this country last month. He made the round trip on the Mauretania in fifteen days, allowing five days in this country, that time being spent in New York, Boston and Montreal. Mr. Hall was greatly pleased with the interest shown in Wellington products, and their steady growth in popular favor the past few years.

THE STEINHEIL LENSES

If you contemplate buying a new lens, do not do so before investigating the merits of the Steinheil Unofocal. The Steinheil line is one that has held a premier place for many years; and, while a great favorite abroad, it has only again been on the American market during the last two or three years. For that reason it is not so favorably known to the younger photographers as it is to the older ones, many of whom were great admirers of the Steinheil Aplanets that enjoyed such a popularity in this country before the anastigmats came to the fore. And the Steinheil factory was one of the first to put out an anastigmat lens, and it put out one of the best. Write the American agents for a catalogue, Herbert & Huesgen, 311 Madison Avenue, New York.

NOTES FROM THE ILLINOIS COLLEGE OF PHOTOGRAPHY

Now that the spring has arrived in earnest, baseball and tennis fever are becoming epidemic among the students; and, judging from the present symptoms, there will be many delirious cases before the summer is over.

The students and some local talent from this city gave a very creditable entertainment in the chapel of Engraving Hall on the twenty-third ultimo.

During the past month we received pleasant visits from Mr. Hull, student of 1898, and Mr. Herancourt, student of 1909. Mr. Ackland, student of 1899, returned for a review course in photography.

The winners of the first, second and third prizes in the last College Camera Club competition, were Mr. Coss, Miss Jones and Mr. Neville, respectively.

Mr. Cain, salesman for the Sweet Wallach Co., made the college a professional visit during the past week.

LOOK FOR THE "AGFA" ADVERTISEMENTS

When a firm has one line of goods to advertise and one so well known as the "Agfa" line, it is not an easy matter to make the advertisements attractive to old readers of a magazine that the firm has used for years for its announcements. But the gentleman having the advertising of "Agfa" products in hand is certainly making most praiseworthy efforts. Not so long ago we had a really valuable formulæ book that was sent for ten cents and an "Agfa" label; a little later another equally valuable book on flashlight work was offered in the same way, and they are both still available. But the advertising now seems to be taking the form of a continued story or series of stories, each made still more interesting by a clever sketch of some phrase of photography, these last being evidently the work of both a clever artist and one with a full appreciation of the charm of photography. The advertisements are well worth looking up and studying each month. Do not let them escape your attention.

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ANSCO IN NEW QUARTERS

Three years ago the Ansco Company opened a branch house here in San Francisco in order to the better distribute its goods to dealers on the Pacific Coast. The quarters then secured were considered ample to meet every requirement, but the Ansco business here on the Coast, as elsewhere, has increased so rapidly that it was necessary, in order to do full justice to its customers, to secure larger premises. To accomplish this, the branch has moved into the Electric Building, on the corner of Second and Natoma Streets, where it occupies the entire fifth floor. The new address is 171-173 Second Street, where Mr. Stanbury and his able force will be pleased to welcome the dealers of the territory. Cyko paper, we are advised, is now received in carload lots direct from the factory at Binghamton, so that dealers in this part of the country may look forward to even more prompt and better service than has been given them in the past.

CALIFORNIA CAMERA CLUB

Considerable more activity than usual has been manifest at the rooms of the California Camera Club, since the opening of the year, with the result that autochrome making, gum and carbon printing, stereoscopic photography, and lantern-slide work have been on the increase.

From among the members responsible for this activity, eleven were induced to run for office on the regular ticket, the same gentlemen being indorsed by a members' committee and placed on the members' ticket. It is needless to state that they had a "walk-over." The new board is constituted as follows: President, Edward H. Kemp; first vice-president, H. F. O'Connor; second vice-president, E. L. Foucar; secretary, F. G. Spencer; corresponding secretary, H. E. Poehlman; treasurer, George H. Preddey; librarian, Charles A. Mauser; additional directors, W. C. Gilkerson, Dr. W. E. Fraser, John R. Douglass, and C. A. Gwynn. Following the voting, on the evening of April eleventh, the members enjoyed two fine sets of slides from the Newark and Tacoma Camera Clubs.

The new directorate aims to so conduct the affairs of the club that photographic interest will be stimulated generally; they propose to hold frequent outings with field demonstrations for the less advanced members, to give instructive demonstrations in the rooms and studio in the more advanced phases of the work, and have exhibits of the best examples of the work of experts.

Prizes will be given for the best negatives or prints made on outings and the like. One wall of the reception room will be exclusively used by the members, the year round, for exhibiting their latest work. From this the best print will be selected each month and used to form a permanent exhibit.

An outing, held at San Geronimo, Marin County, on Sunday, April thirtieth, was largely attended, and many of the members have signified their belief in their having made the really best negative of the day; but, as the prints are displayed, we shall see, we shall see.

H. E. Poehlman,
Corresponding Secretary.

"POPULAR MECHANICS" DOES NOT CLUB

Through a mistake in making up our clubbing offers, making them up with a desire to include all the most popular publications, we overlooked the fact that the publishers of *Popular Mechanics* have a strict rule that it must not be offered in clubs and combinations. Our oversight has a tendency to place them in a false light with those dealers who do not approve of clubbing offers, and who have their assurance that their magazine will not be so offered. Hence, this explanation to our readers, and our apologies to the publishers of our popular contemporary. The magazine has been removed from our list of clubs, but straight subscriptions will be received by us as well as for all other magazines published.

UP-TO-DATE BACKGROUNDS

Have you sent for that handsome catalogue of Seavey Co. Backgrounds? If not, do so at once. You may not need a new background; one never really does have to have a new one, but get the catalogue and amuse yourself looking over the fine designs and imagining the fine effects you would produce with one of these handsome, yet quiet, productions. Address, Seavey Co. (formerly Chicago Photo Scenic Company), Hartford Building, Chicago, Illinois.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. Those of positions wanted inserted free. No business advertisements will be accepted.

FOR SALE Gallery outfit and business in fine town, 94 miles from San Francisco. Best climate and water; population 3,000 and increasing. A good man can make good here. My health demands more outdoor life. Write soon. Address Box 575, Hollister, Cal.

FOR SALE Only studio in growing town of 2,000. Furnished for light housekeeping. Must sell as I have other interests in the north. Address Art Studio, Azusa, Cal.

FOR SALE Photo Studio in San Jose; also fitted for commercial work. Good location. For further particulars address E. B. S., 31 Angerais Bldg., San Jose, Cal.

FOR SALE the leading studio in a progressive western city of 12,000 population. Studio new and up to date; reception room furnished in solid oak, mission finish; operating room 40 feet square, north light and new Aristo lamp, 8x10 portrait outfit, 8x10 view outfit and 5x7 view outfit. All rooms of studio steam heated. Rent $30.00 per month. Studio enjoys the confidence and patronage of the leading people in the city. An A1 business proposition for a good workman. Price $1500.00. Refer by permission to Fayette J. Clute, Editor of "Camera Craft". Address W. G. Emery, Vancouver, Wash.

FOR SALE San Francisco studio, good location, fully equipped and doing a good business. Must sacrifice. Good reason for selling. Address S. L., care "Camera Craft," San Francisco, Cal.

FOR SALE The only studio (ground floor) in Goldfield, Nevada, doing a business of about $4,000.00 per annum, fitted out completely up to 8x10 work, located in the heart of the city. Cabinets $5 00 to $15.00 per dozen. Owner has mining interests which require his entire attention. Rent $25.00 per month including living quarters; license $12.50 per quarter; electric light and water; framing outfit and moulding stock also included. A good proposition for a live man, at the bargain price of $600.00 cash, no payments considered. Will invoice for $1,500.00. Population of Goldfield, 5,000. The greatest gold mining camp in the west; monthly payroll $200,000.00. Climate excellent; living expenses reasonable. If you want a snap communicate with Weyle Art Shop, Box 487, Goldfield, Nevada.

FOR SALE Studio; finest residence studio in Los Angeles, ground floor bungalow, large north light, fully equipped up to 8x10, completely furnished, prices $6.00 up per dozen. Fine family trade, ground rent $20.00, three years' lease, owner not a photographer. Price complete $1,500.00. Duplicates pay rent. Might consider partnership from some good live man. Price includes building and 4,000 negatives. E. G. Forrest, West Lake Park, Los Angeles, Cal.

WANTED 3A Special Kodak, fitted with Goerz, Zeiss or Cooke lens. Write, giving price. C. B. care "Camera Craft", San Francisco, Cal.

WANTED June 1st, view man to travel, headquarters Nebraska. Men wanted for Nebraska territory. Only first-class workmen and hustlers wanted. Address Printer, 414 13th Ave., North Seattle, Wash.

FOR SALE Circuit Outfit No. 8, equipped with B. & L. Zeiss Protar VII No. 12 Lens, as listed in Century Catalogue at $283.00. This camera has been used less than a dozen times and is as good as the day it was shipped. We will sell this outfit complete, including six eight-foot films, for $195.00. Gibson Kodak Store, 21 W. Forsyth St., Jacksonville, Fla.

FOR SALE First-class studio, two entrances on the two main streets; best location in town. Lease holds until after the fair. Address Shaw & Shaw, 1115 Broadway, Oakland, Cal.

FOR SALE Studio in a progressive Western city of about 15,000 population, with many small towns within a few miles to draw from. Operating room 20x30, single slant metal skylight, large reception room, dark room and work rooms; one of the best studios in the city. Five years' lease; rent only $14.00. Equipped with everything needed in a first-class studio for work up to 8x10. Located right in the heart of the city on main street, doing business right along. A good opening for a first-class man. Studio is well advertised and enjoying the confidence of the public. Act quick if you want to get the best chance of your life. For further particulars address Unique Studio, West 2nd St., Pomona, Cal.

FOR SALE Filmplate Premo, 3¼x5½, Planatograph lens, B. & L. Automatic shutter, film pack adapter, six Premo plate holders, Premo film pack tank, brass developing tank, 14 plates, specially made. Outfit used a year. Bargain. A. L. Burgess, 879 E. Long St. Columbus Ohio

FOR SALE A No. 5 Voigtlander Euryscope portrait lens, 16x20, in perfect condition, $50.00. Also a Cooper-Hewitt photo-engraving lamp, two tubes with stand and wire, $30.00. The Albertype Co., 250 Adams St., Brooklyn, N. Y.

FOR SALE A 24x30 one-story frame building; east front, north light, corner lot 50x150 ft., in center of business section, town of 700; fine farming community; $1500.00 takes it; $750.00 cash, balance on easy terms. Address Hebron State Bank, Hebron, N. Dak.

FOR SALE New 4x5 Revolving Back Auto Graflex, Goerz lens, fitted for plates and film packs. Bargain price $135.00. Wm. F. Uhlman, 716 Francis St., St. Joseph, Mo.

FOR SALE A good 5x7 Rapid Rectilinear lens in Regno shutter. Bargain price $15.00. Address E. W. Cochems, San Marcos, Cal.

FOR SALE Photo studio in one of California's best cities of 40,000 population. Very low rent and long lease. Conditions ideal and a real bargain. Address B. B., care "Camera Craft," San Francisco, Cal.

PARTNER WANTED Young or middle aged lady. Must have some knowledge of photography. Address Lock Box 341, El Paso, Ill.

FOR SALE 5x7 Graflex, like new; has 8-inch Cooke anastigmat, f-5.6 and 12-inch extension. Tank, changing bag, holders, kits. Outfit cost $185.00, will sell for $125.00. C. Osborn, Zaragoza 170, Monterey, Mexico.

FOR SALE 4x5 Auto Graflex, 1910 model, fitted with 5x7 Goerz Dagor lens and magazine plate holder. Cost $130.00, will sell for $90.00; just like new. Also 3A Special Kodak with Kodak Zeiss lens and compound shutter. Cost $65.00, will take $45.00; just like new. A. P. Richard, 1028 Greenfield Ave., Milwaukee, Wis.

FOR SALE Century Grand Senior 5x7, fitted with Series 7A No. 8 Protar convertible with Volute shutter and Protar wide angle 5x7, one Burke & James ray filter, one film pack adapter, five extra plate holders and carrying case. Cost $190.00, will accept $125.00. E. E. Bement, Concord, Cal.

POSITION WANTED by neat appearing young lady, first-class receptionist, understands coupons thoroughly, also handling high-price regular trade. Experience in all branches; capable of taking full charge; eight years' experience. Can give the best of references. Address L. T. C., Box 487, Goldfield, Nev.

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In Just Three Minutes

—a velvety carbon-green print with all the bother of carbon printing left out.

KODAK

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Expose by daylight; develop and fix like Velox. Absolute uniformity of tone and great latitude. Just the thing you have wanted for landscapes, containing green foliage, seascapes, etc.

Something that has always been just out of your reach. Single Weight, Double Weight and Post Cards at Velox prices.

EASTMAN KODAK CO.,
ROCHESTER, N. Y.

All Dealers.

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A Perfect Print from every one of your negatives can be had on some one of the grades of

VELOX

The acknowledged standard of developing papers for pictorial photography. Make Velox *your* paper and be sure.

Ask for the "Velox Book."

Nepera Division,
EASTMAN KODAK CO.
ROCHESTER, N. Y.

All Dealers.

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Vol. XVIII No. 6 JUNE, 1911 Price, 10 Ce

Camera Craft

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SAN FRANCISCO, CALIFORNIA

In Choosing

a paper, your decision should be based on a close study of all the important factors: its uniformity, tonality, plasticity and dependability—its manufacturer—the guarantee that stands behind it.

In all these essential requirements CYKO furnishes a long and well established record, and continued elements for achievement as demonstrated by the daily work of the leading photographers of the country.

Ansco Company

Binghamton, N. Y.

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ONE OF THE SET WINNING
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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY
FAYETTE J. CLUTE, Editor and Proprietor
CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII JUNE, 1911 No. 6

An Amateur's Experience

By Charles E. Rau

With Illustrations by the Author

NO MORE CURLS FOR ME

SINCE taking up photography, I may have had experiences that do not come to others; but, as a rule, the difficulties are the same to all beginners. Should the recital of some of mine take on an appearance of advice, it is only because I feel that at this later date I may perhaps benefit a few who are less experienced.

It can be said that my interest in photography came about by accident, and yet, were I some years younger, I would make it my vocation, so strongly does it appeal to me. It came about in this way: My wife had some "cash purchase certificates" with which she hoped to obtain a set of dining-room chairs, but the firm was "just out," and in order to use the certificates before their time limit expired, we used the greater part of them—"payable in goods only"—to secure a "box camera and outfit." I later learned from the catalogues that the camera was listed at $1.95.

Among other essentials accompanying the camera were half a dozen 4x5 plates. The first exposure was a "snapshot"—not of the baby indoors, in an impossible light, for the baby was grown and away from home; but of our

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house, taken from the street. The light was good and the time of exposure about correct. My very first lantern slide was made from this negative, and it was perfect, the best slide out of my first dozen or more.

I took the exposed plate to a friend, who was a came-ra'-riast—this is a new word, accent on ra, and not copyrighted; it is expressive, shorter than camera enthusiast, and sounds better than "camera fiend." I watched the developing in a room that I thought was entirely too dark to work in; was elated at the image "coming up," saw it put through what I later learned was the fixer, and finally taken out into the light.

I asked if I could take it right home to show my wife, and was disappointed when told that it had to be washed for an hour and then dried. I asked no more questions, as I thought my friend must know his business, for I had seen some of his pictures, though just then I didn't understand why it had to be washed any more, for it certainly was soaked up good and plenty, if anything could be, while we had been in the dark room. I went home, told my wife how it looked, and in a couple of days the friend brought the negative and a couple of prints; and you may be sure we were in high spirits over them.

This first success was a great stimulus; but it was too easy, leading me into much poor work afterwards. I became thoroughly enthusiastic, went through a camera catalogue, and immediately ordered fourteen dollars and sixty-five cents worth of "supplies." This was over three years ago, and I still have most of these supplies, although I have used several hundred dollars' worth since that time.

Whenever I see any of them, my thoughts go back to my first experiences, and remind me of the wastefulness of untimely purchases; I do not say useless, for there are times when every article of my first purchase can be used to profit, but not by a beginner. Every time I see one of these articles it says loudly to me: "Be careful"; and right here is the keynote to success. Carefulness; not a slavish, slow movement about one's work, but the doing and not doing of little things that make for success or failure. Light, time, water and chemicals are all necessary to success, but careless or indifferent handling of them tends toward failure.

Inform yourself as to the necessary procedure, then go ahead, paying attention to details; this will soon become mechanical and the feeling of fatigue or irksomeness, caused by the exercise of care, ceases to accompany your work. If, then, you are asked, "How do you make such nice pictures?" your unthinking reply will be, "Oh, I just make them."

I found that a cheap pair of scales will do, a more expensive pair is better, but the best scale is better than all others. I now have the first two pairs for sale. Carefulness includes accurate weighing; don't find fault with a formula until you have weighed it up correctly. I mix up one hundred ounces of paper developer at a time, using a one-gallon clear glass bottle, which I have marked with a glass cutter at the one hundred-ounce line. I secured a number of these large bottles from druggists and barbers, free of cost. After the solution has stood overnight, or longer, I draw it into eight-ounce bottles, full and well corked. The repeated use of corks soon destroys their safety, and I was on the

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IN PEACEFUL PASTURES

point of ordering a supply of eight-ounce glass-stoppered bottles, when I chanced to see an empty perfume bottle in a drug store. I bought, at various places, over twenty of these bottles, paying five cents for two, and occasionally five cents each. With a glass-cutter, I immediately marked these bottles and their individual stoppers to correspond, I, II, III, IV, V, etc.; for a glass stopper, as a rule, fits only its own bottle. I rinsed these with water, washed them about a minute with diluted No. 8 acetic acid, and again rinsed well.

MIDDAY COMFORT

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My glass developing dish, bottles and graduate get coated or spotted with a hard, white coating. Various chemicals failed to cut this, and for a time I scraped it out of the dish with a knife. Quite accidentally I discovered that acetic acid would readily cut it, and now I use this, diluted, to clean dish, bottles and graduate, and after rinsing well they shine like cut glass.

My glass developing dish for cards is oblong, just a little larger at the bottom than the card. It holds eight ounces of developer nicely without slopping over, and this amount will develop fifty to seventy-five post cards, according to how well they are drained back into the dish. Once we developed one hundred and twenty-nine in eight ounces, but had to wash the mud off the emulsion of about forty of them. We keep the developer dish in about half an inch of water in a larger graniteware pan that rests by its rim catching on the edges of a hole cut in the table top. When too warm, we place small chunks of ice in this outer granite pan. The pan containing the fixing bath sets in the sink and is kept cool in the same way. Spoiled cards have taught me to make haste slowly when it comes to hurrying the action of chemicals by allowing them to warm up.

Doing much work at night, as I have to for the lack of time, I leave cards in wash water until morning, but the water must be free from sediment and the cards must be turned face down. If not, one will have to wash them well with a tuft of cotton the next morning.

We suffered much from metol poisoning; tried rubber finger tips, and pastes, but the best of all is a hickory or hard maple paddle about the size of a slate pencil, flattened quite thin at one end to make it flexible, and sandpapered smooth. This paddle is always used in the same hand, and after a little practice is never laid down while working. With it the cards are pushed under, moved, or lifted up, and this, if quite vigorously done, prevents or removes air bells by the swish of the developer. If the cards are about correctly timed in printing, they can be lifted out of the developer just before they reach the right depth, taken edgewise between thumb and finger and drained from one corner back into the developer dish. If held too long out of the liquid, the deeper shadows will become uneven in tone; better put them back into the developer than have this occur. This thumb and finger go into the rinsing water along with the card; and, after the card is slid into the fixing bath, given a push or two with a hard wood paddle, the wet finger tips are more or less dried by pinching a clean cloth well bunched up. Don't use rinsing water until it feels slippery, for it is then unsatisfactory in every way, and keep the fingers off the emulsion while draining developer back into the dish, or you may have spotted or stained cards.

My first purchase of supplies included six 5x7 squeegee plates for glossy cards, but after the first trial or two it was a long time before they were again used. I knew nothing of non-abrasion developer nor of potassium iodide for the prevention of abrasion marks, so what little work I did was on mat surfaces. For a long time I complained to dealers and others of the abrasion marks, without finding a preventive, until finally I was informed by a practical photographer that "a few drops of iodide of potassium would do the work." How

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many drops to the ounce was left for me to find out by experience. I have since learned that such indefinite instructions from a candid professional only means that exact quantity does not matter, but in this case it does matter somewhat, for too little iodide requires addition from time to time, and too much badly retards the action of the developer.

A friendly druggist, to whom I paid a big price for twenty grains of iodide of potassium at a time, told me that one drop of water would dissolve one grain, so I commenced using a two-drops-to-the-grain solution, putting more of this at a time in the developer; but a "one in ten" solution is safer to handle. Later, a card manufacturer sent me a formula for non-abrasion developer, and I then weighed the iodide in by the ounce. As soon as I learned of a preventive of abrasion marks, I again commenced using glossy cards and paper, primarily because of the greater detail obtainable. I then took up the use of the squeegee plates, and I learned that to hasten the drying caused disagreeable-looking rings and that drying in a cool place, out of a draught, would give the nicer surface.

Soon there occurred a fire, and my friend, the one who developed my first plate, urged me to go and get a picture of the ruins. I had by that time gotten hold of a 5x7 camera, but could not see how I would be benefited by spoiling a plate or two on these ruins; however, my wife said, "Go ahead," and I went. I think I gave one-half second exposure with an f-16 stop. I got two fairly good negatives, but how I came to give them one-half second exposure I don't know, except that for a long time my idea of how the image was impressed upon the plate was one of a sort of burning in; the longer it was exposed, the plainer the image. As a result, my fault for a long time was overexposure; but since I have learned more of the effect of light upon a plate, I

A PICTURE OF THE RUINS

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realize that my first idea was, in the main, not so far from correct. But I had to learn that a good thing could be overdone.

The one-half second exposure on the blackened ruins gave me good detail; I made a few cards, and neighbors who were interested in the burned building bought some of them. This gave me the idea that others might be interested, and I put a few in my pocket. I soon met a dealer in post-card pictures, on the street, and mentioned to him that I had a couple of pictures of the ruins and asked him if he thought they would sell. He said he did not know, but asked that I let him see them. He merely glanced at them and said, "Yes, they will sell," and gave me an order. This started me going, and I have been going ever since with increasing speed and improved quality of work. I am away from home most of the time, carrying with me a 5x7 camera with an Anastigmat and a wide-angle lens, and flashlight outfit, picking up new business in leisure hours, as well as getting re-orders.

At first, two dozen cards were enough to buy at one time, after awhile a half gross, then a gross, and then I thought I was doing a big business. Later I bought five hundred at a time, and the local dealer considered me one of his best customers. But one or two failures in securing this quantity of cards from him drove me to inquire of larger dealers and I found I could get five thousand cards at a time much cheaper. This quantity rather staggered me, but in 1910 I used over ten thousand cards of one emulsion, besides over fifteen hundred of more contrasty ones. I used to consign a quantity of negatives to the "waste" until I found that many of them made good prints on a contrasty emulsion, and others of my plates were saved by the use of an intensifier, while some that I thought were fairly good were made better by being slightly intensified. I buy my 5x7 paper by the gross, use fourteen or sixteen-ply card mounts, and a sight of my work secures an order if there is any show whatever for one.

Do I spoil any cards or paper? Yes; in securing right tone, and by carelessness of some kind.

Portrait work? Ugh! please close that door, it gives me a chill. I have many occasions for indoor pictures of people, but hardly dare call them portraits. I have some good groups, indoors and out, and even attempt photographing children—to the spoiling of many plates; but I prefer to get them out of doors, where I can take "snapshots." "Retouching?" you ask. W-e-l-l, I've made a dandy folding retouching desk, over which I use my focusing cloth, but you ought to see the work; talk about retouching—whoopee! I can do the transformation act on a negative to perfection, and you would never suspect that the person in the print and the sitter were any relation, hardly the same nationality. You needn't turn your head; I heard you laugh, but laughs don't "feaze" me, even if I cannot yet transfer a nose, eyes and mouth to an eggshell like some professionals! I have hopes, for I believe that retouching desk is a practical piece of apparatus, and if I have time I am going to master the art of retouching, at least to a certain extent.

I first used the bathroom as a dark room and exposed by a light in another room, but one-half to three minutes, or longer, was required to print from my

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BUNNIES

CHRISTMAS

THE BABY

earlier negatives. This would not do at all, so I invented quite a number of "contraptions" for the more expeditious handling and more rapid printing of cards. One invention gave way to another, and this evolution is still going on.

I now use a light wooden box with two compartments, one for unexposed, the other for exposed cards. The lid is hinged, and a slight pressure of one knee raises it, a release of the pressure allowing it to close of its own weight. This leaves both hands free to place and lock card into the printing frame. This frame is a professional 5x7, fitted with a pivot on each outer side, near one end; and, swinging in a hole cut in the table top, it is nicely balanced by a weight running on a screw. It is swung by a heel-and-toe treadle, turning down and towards one for the placing and locking in of the card; down and from one for exposure to an inverted gas mantle light. The negative is in plain sight, at a convenient distance, level with table top, and both hands are free for vignetting or dodging.

HURRY UP! IT'S HARD WORK KEEPING STILL

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I tried several reflectors to aid in printing, but as a rule all bright reflectors threw the light in spots. Finally I secured, for one dollar, a tin shade reflector lined with ten or twelve segments of corrugated looking-glass. This reflector distributes the light evenly and makes it several times faster than a one hundred candlepower Wellsbach gas mantle that I used to have confined in a white-lined box.

We place the cards face to face, after printing, and they go through the developer, the wash water, and into the fixer, two at a time, back to back. If the backs are quite well together as they go into the developer, very little of the solution gets between them, and this is a great saving, not only of developer and fixing bath, but of time. Time does not, perhaps, count for much with those who only make pictures for pleasure, but it is very important in commercial work.

We wash about two hundred at a time for one hour in running water. A graniteware dishpan, with a small hole punched through just where the side joins the bottom, is used, the hole being supposed to draw off any hypo that might settle. We attach to the faucet a short rubber hose, "choked" at free end so that it delivers the water with some force against the inside of the pan; cutting down and under the cards, it tends to lift them and keep them pretty well "fluffed" up, the water running over top of the slightly tipped pan as it sets in the sink. We now have squeegee plates for two hundred cards; and after they come off these plates, we put them in an improvised screw press, made to fit the card. Should any be ill shaped and too dry to press into shape, they are either sponged lightly on the back or are put back into the water to be again squeegeed later. And no card rack contains better cards than ours.

We boil and filter soft or hard water for developer, but avoid the use of soft water if too much discolored. For the fixer we use tap water, straining the solution through filtering cotton. This cotton would pack in the neck of the glass funnel, making filtering very slow and tedious. To remedy this, I snap a couple of clean broom straws into about half-inch lengths, and put these in funnel under the cotton; this keeps it from packing, and straining is quite rapid.

But, say, where will I stop? This is already a mile long, and still more to say. It will have to wait until another time.

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Dealing With Over-Exposure

By W. Bush

MAKING CAKE By L. E. TIEDE

HERE are, I suppose, many CAMERA CRAFT readers, amateurs like myself, who occasionally come upon a bad case of over-exposure; but, I venture to say, a very large part of them are quite at a loss how to overcome the difficulty. I know the instruction books tell us to keep on hand a bottle containing a ten per cent solution of bromide of potassium, and on such occasions use ten to twenty drops in the developer. Others direct one to keep a mixture of the same close at hand, and, with a swab of cotton wool, freely bathe the plate when it shows over-exposure. In fact, there are lots of instructions as to how one can manage an over-exposed plate, but I am quite ready to admit that I, personally, never succeeded in saving a plate by following them.

I have, on several different occasions, successfully overcome this difficulty, and I propose to herewith present my method, with the assurance that it will do the job. I have never seen my plan described, but simply "caught hold" through experimenting with diluted developer (I believe in using lots of water), and as I have quite recently repeated the operation I will at once proceed to describe the process, which in my hands insures a good, printable negative from a sadly over-exposed plate.

By request, I made preparations to take a picture of a group of ladies. It was on a dull day, about 3:30 p. m. With the subjects in a poor light, I gave what I considered a fair average exposure for such a subject; but, through miscalculating or possibly the shutter sticking, I gave much too long an ex-

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A FAMILY GROUP By W. BUSH

posure. Very much to my surprise, a few seconds after pouring the developer over the plate, it commenced clouding over, and by the time it had been in the developer some forty seconds it was so darkened over that not a trace of an image could be seen. I venture to say that nine out of every ten amateur photographers would, at that stage, have given it up as a hopeless case of over-exposure.

In my dark room I keep a small, light-tight box, about two inches deep, and large enough to cover my developing dish. When I saw the condition of my plate, I took it out of the developer, put it into a dish of clear water, placed the dish aside and under my light-tight box, and covered it with a dark cloth to make it secure from any possible stray rays of light. There I left it, proceeding to develop a lot of plates which I had ready. This work occupied my time for fully forty-five or fifty minutes.

I then concluded to look at my over-exposed plate; and, upon examining it, I found it so dense that nothing at all could be seen of the picture. But, as I was quite convinced that I had something thereon, I at once put it into the fixing bath. I let it remain there twenty minutes, in the meanwhile taking a small crystal of ferricyanide of potassium, about as large as the tip of the little finger, and after grinding it with the pestle I put it into a glass dish with sufficient clear water to cover the plate. By this time my plate was fixed, and I took it out into the light to look at it. There was my picture, plainly visible, but far too dense to print from. I then placed it in the ferricyanide bath; and, standing under the electric light in my dark room, I could plainly watch the gradual reduction of the density of the negative as I rocked the tray. And

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there is where the process must be closely watched. The negative, having lain in the fixing bath for twenty minutes, is thoroughly saturated with hypo. Consequently the ferricyanide, combining with this hypo, forms a reducer that will act very quickly. By having the plate in a glass dish and working under the light, the process of reduction can be distinctly seen and followed, and just as soon as the negative begins to look bright and clear, take it from the bath and, holding it under the tap, let a gentle stream of water run evenly over its surface. If, after washing, it still appears too dense, return it to the reducing bath for further treatment. Finally, when sufficiently reduced, wash in running water for one hour, and set up to dry. The result will be a good negative, in proof of which I herewith enclose a picture from the negative in question, which I will be pleased to have reproduced so that your amateur readers may see what can be done by following this process of reduction.

In conclusion, I would advise every serious worker to have a small light-tight box at hand for such an emergency. In addition, he should have a small, wide-mouthed bottle, fitted with a screw top, and containing ferricyanide crystals. By keeping the bottle in a dark place, the crystals will continue good almost indefinitely.

Using A Soft Focus Lens

By C. A. Gwynn

Illustrated by the Author and H. S. Hoyt

The editor seized upon a couple of prints made by a fellow club member last month, prints from negatives made with a Bodine lens, and reproduced them, together with a statement that I would describe my experience with another of the same lenses this month. I find, as he assured me was the case, that a good number of my fellow workers are interested in pictorial work, and consequently, may be interested in my experience with one of these lenses of the soft focus type.

Briefly, the Bodine lens, like the Pinkham & Smith Semi-Achromatic, which I have since tried and like very well, is a single combination with the diaphragm in front. It works at f-6, and is, therefore, almost too rapid to be used without a shutter. Mine is of eleven inches focal length, cutting a 5x7 plate perfectly. The focal length is an excellent one for pictorial work, as it does not give the effect of distorted perspective obtained with a focal length of six or seven inches.

On my first expedition afield with the new lens, I carried my pet anastigmat as a matter of course. In the future I will do the same, because it is invaluable when architectural or high speed work is to be done; that is, high speed work that is required sharp. The Bodine lens has high speed, but only at full opening,

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and at full opening the definition is entirely too soft for that class of work. But where a high speed is not demanded, any degree of sharpness seems to be possible with the Bodine lens, provided it is stopped down sufficiently. I had an idea that the lens would produce only what some of my fellow club members call "brain storm" pictures, but I found that, by gradually decreasing the size of the stop, everything cleared up as the stop was made smaller, until at f-16 the image became about as sharp as one could wish for contact printing. A smaller stop might be required for negatives from which sharp enlargements were required, but I have not tested out that matter. With a lens of this type one can get, using it wide open or nearly so, that softness without any particular plane being sharp, that seems to be so characteristic of the pictures that win prizes and salon honors, the inference being that many of our best workers use some one of these soft working lenses. And the softness secured must not be confused with the softness obtained by throwing the image slightly out of focus in making an enlargement. The difference can easily be seen on comparing a print from a negative with a soft focus lens with an enlargement from a small, sharp negative. I mention this because I tried to find out, before buying this new lens, what the difference, if any, really was. No one could tell me in so many words, but the knowing ones insisted that there was a difference, and one that was in favor of the soft focus lens.

Perhaps the effect can best be explained by referring to the illustrations herewith. The group on the fence was made with the lens stopped down to f-16, and a color screen used. This, it will be seen, has fine atmospheric effect, and while the faces and figures are as sharp as could be desired, they have not that

AN UNCONVENTIONAL GROUP ARRANGEMENT By C. A. GWYNN

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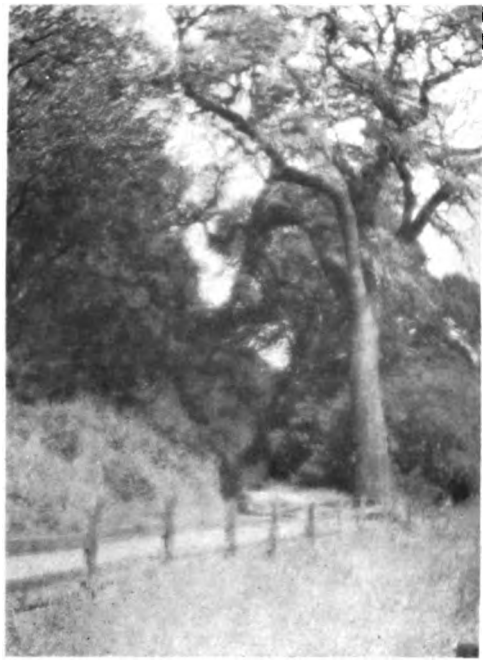
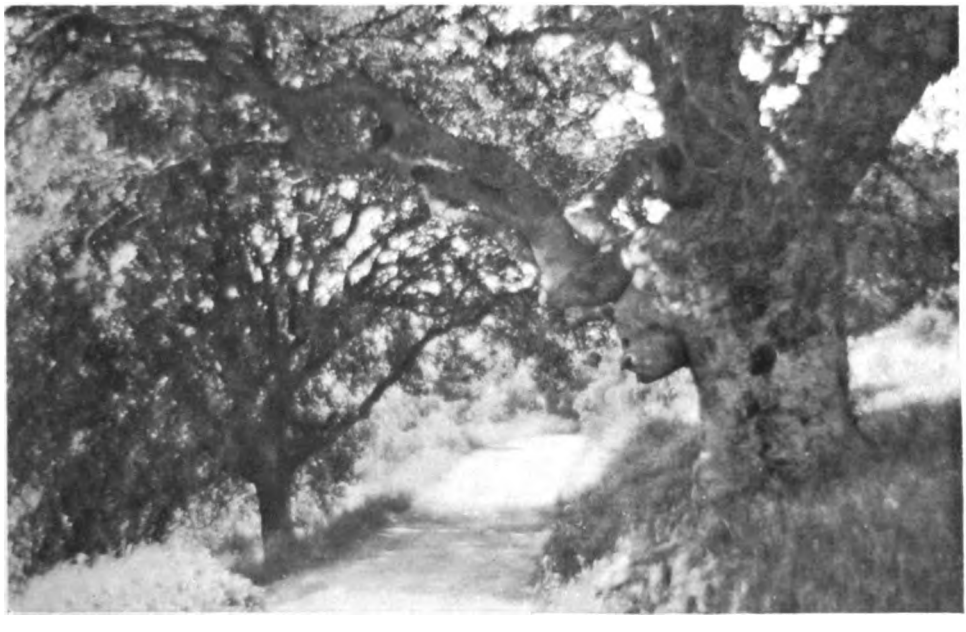


EDGE OF THE WOOD

PATH DOWN THE HILL

wiry appearance that suggests the need of a little retouching. In the two companion pictures, one was made with the f-16 stop and the other with the lens wide open. These two last show the wide variety of effects that can be secured by merely changing the size of the stop. The one made with the lens wide



A CONTRA COSTA ROADWAY

By H. S. HOYT

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THE CREEK HAS A CHARM ALL ITS OWN By C. A. GWYNN

open was focused as near as possible with the lens as used. The two by Mr. Hoyt were made in the same way. But there is another way of using the lens that I believe is the best, and that is, to stop down to f-16, focus, and then open up the lens and make the exposure. This was the plan followed in the making of the creek scene, and I shall use that plan in most of my work in the future. One will find that, working in that way, the lens is at a point a little back of where it would be placed were focusing done with the open lens. Focusing at f-16 and then opening the lens, one will find what appears to be halation surrounding all the lights in the image, and, while everything appears to be fairly sharp in the resulting negative, there is a peculiar blur and softening of outline that cannot be secured in any other way. And this effect of halation that is seen on the ground glass, when the lens is opened up from f-16 to full opening, can be gotten rid of by racking the lens back just a trifle. This will be placing it where it would be focused if focusing were done with the full opening at first. The result will be harder and more like the "Edge of the Wood" picture shown as a companion to the one made with the lens stopped down.

In all of my work I use a Cramer Isonon or Standard Orthonon plate, and with the examples shown, used an autochrome color screen behind the lens. I realize fully that the use of a soft focus lens will not make a success of every exposure. Spotty subjects should be avoided. Pictures made up of broad masses of light and shade seem to lend themselves to the soft focus treatment much better. There is required the same care in selecting suitable subjects if

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THE ROAD ALONG THE FOOTHILLS By H. S. HOYT

pictorial effects are sought. A picture is not made artistic simply by making it a little lacking in sharpness. But a certain class of subjects are made more artistic by using a soft focus lens.

But just try one for yourself. They are inexpensive, and, after getting acquainted with one of them, you will be well pleased with your results. You will be better satisfied with the pictorial quality of your work, and you will again feel that there is still a chance to obtain some of the good things we are all looking for.

The Dead Level of Intelligence

It would be hard to find a more serious menace in human society to real culture than the innumerable people one sees about today appearing to know the wrong things—things that do not belong to them to know—that they have no spiritual right to appear to know.

There are three objections to the Dead Level of Intelligence, to the getting people at all hazards to appear to know certain things. First, the things that a person tries to learn in that way are damned by his appearing to know them. Second, he keeps other people who might know them from wanting to. Third, he poisons his own life by appearing to know what is not in him to know. He takes away the last hope he can ever have of really knowing anything. He destroys the Thing a man does his knowing with. It is not the least pathetic phase of the great industry of being Well-Informed that thousands of men and women may be seen on every hand giving up their lives that they may appear to live, and giving up knowledge that they may appear to know—taking pains for vacuums.—ACADEMY NOTES.

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Using Daylight For Printing

By William R. Inghram

The advantages of the following method of daylight printing will evidence themselves to the amateur photographer, particularly to the one accustomed to the more tedious method used with gas or electricity as the source of light.

The ordinary trays, solutions, and other equipment, as usual. A room, preferably with but one window, and a table. Upon the outer side of the window, and over the lower half, hang about three thicknesses of canvas, about No. 12. If a lighter weight is used, additional thicknesses will be required, the number depending upon the desired rapidity of the printing. In practice, it will be found more satisfactory to print the thin negatives, reserving the denser ones until the last, when two or more thicknesses of the canvas may be removed, thus evening up the printing time. Pull down the window shade or curtain and fasten with push pins so that no direct rays of light can reach the paper. If the shade is old or cracked, it may be necessary to cover the upper half of the window with heavy paper, using push pins to hold it in place. The stick is withdrawn from the hem at the bottom of the shade so that one corner can be raised with the left hand while the right hand is used to insert the printing frame into the "printing light" behind. A candle will give sufficient light for developing, or a door opening into another room may be left open, the shades in the other room being partly drawn to subdue the light. It is hardly worth while to begin printing with less than half a gross of prints to be made, as you will be done before the fun has half begun.

Cut a sheet into one-inch squares for test strips. A little practice at counting seconds, using any of the different methods advised, will be found a convenience in timing. One plan, given in the Eastman manual, is as follows: "Naught" (saying this as shutter is opened, in our case as frame enters printing light), "one-half and one, one-half and two, one-half and three," and so on, the last number spoken being the number of seconds' exposure. Stop with "one-half" for a half second. A metronome may be used; or, one may suspend a small weight from a bracket by means of a string thirty-nine inches long, and each swing will represent a second.

A negative requiring three minutes to print by a thirty-two-candlepower electric light can be printed in about ten seconds by daylight used in this manner. The light should be adjusted by adding or removing canvas coverings over the window until a thin negative prints in about three seconds, and then there will be little or no trouble with over-printing. Simply hang up another thickness of canvas if the light is found to be too "fast." The light is so thoroughly diffused by the canvas that any shadows falling on the window may be ignored.

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Intermountain Fourth Annual Convention

Secretary's Report

SALON HONORS By LEROY KELLOGG
FOURTH ANNUAL INTERMOUNTAIN CONVENTION

The Fourth Annual Convention of the Intermountain Photographers' Association was held at Salt Lake City, April 5th, 6th, and 7th. In planning for this meeting, it was decided to make it a "Business Convention," giving attention, as much as possible, to the discussing of the business side of our profession.

The first session was opened on time, as were all others, by Vice-President Kellogg, who, in the absence of President Cooley, occupied the chair. In a few well-chosen remarks, he welcomed the members, and the Convention settled down to business. J. F. Rabe, of Logan, delivered an interesting talk on "The Daily Routine of Business," and was given the closest attention. He was followed, along the same line, by other members. In the evening, the committee appointed to hang the exhibits met, and hung the numerous entries. The exhibit this year exceeded by far that of any of our previous Conventions, and the general standard was very high. Competition for first honors, in every class, was keen. The Grand Portrait Class, open to any photographer in the United States, was entered by a large number of our members, as well as by some of the leading photographers in the country.

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ONE OF THE SET WINNING
CLASS A GOLD MEDAL
INTERMOUNTAIN
CONVENTION
✠
TABOR GRAND STUDIO
BY BARTON J. HOLYER

The next morning found a good number assembled at the Chase studio, where Leroy Kellogg gave a lecture on "Physiognomy," illustrating his remarks by drawings and by using some of those present as subjects. This was followed by demonstrations in lighting, posing, and the handling of drapery. Mr. Savage next gave a very interesting demonstration and lecture on lighting and posing, showing how to secure the different effects.

At the afternoon session a paper, "The Cost of Producing Photographs," was read by M. F. Jukes. He called attention to the conflicting ideas of the photographer as an artist and the photographer as a business man. He held that but few photographers knew the actual cost of producing a dozen photographs. Harry M. Fell, of the Eastman Kodak Company, followed with an excellent talk on "Business Methods in the Studio." The question, "Is It Profitable for the Photographer to Make Post Cards?" came up, and was discussed by almost every member present, bringing out an exchange of ideas that was highly interesting. The selection of a meeting place for next year was the next order of business, Salt Lake City being unanimously chosen, on account of its central location. The appointment of judges was left to a committee selected for that purpose. The meeting then adjourned to the demonstration room, where Harry M. Fell and his assistants demonstrated the different brands of paper manufac-

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tured by the Eastman Kodak Company. In the evening the members attended the theatre, the attraction being Clyde Fitch's comedy, "Girls." Applause was generous, and everybody "looked pleasant."

The morning of the third day was given over to demonstrations on Cyko paper by Teddy Muller and assistants, of the Ansco Company. At the afternoon session, the report of the Secretary-Treasurer was read and approved. The minutes of the last Convention were also read and approved. The following officers were elected for the ensuing year: President, F. E. Dean, Grand Junction, Colorado; Secretary-Treasurer, Leroy Kellogg, Denver, and State Vice-Presidents: Utah, J. F. Rabe, Logan; Colorado, O. E. Aultman, Trinidad; Idaho, R. A. Jones, Preston; Wyoming, Miss Attie Baker, Evanston, and Nevada, J. H. Scott, Ely.

GRAND PRIZE TROPHY By M. J. STEFFENS
INTERMOUNTAIN CONVENTION

The judges reported as follows: Grand Portrait Class, Commodore Steffens, Chicago; Salon Honors, Leroy Kellogg, Denver; Class A, Tabor Grand Studio, Denver; Class B, Larson & Nygreen, Provo; Class C, P. J. Kirwan, Glenwood Springs; Miniature Class, C. B. Armstrong, Idaho Falls, and View Class, A. F. Hust, Salt Lake.

In order to bring out a still larger exhibit at the next Convention, a motion was passed that prizes be discontinued, and that every member be requested to bring an exhibit of three pictures. A vote of thanks was extended the Acting President and the Secretary for the successful manner in which they had handled the Convention. The manufacturers and dealers were voted the thanks of the Association for their liberal patronage and support. In addition to the local dealers, the manufacturers were represented as follows: Eastman Kodak Company, by H. M. Fell, W. B. Stewart and H. H. Scofield; Ansco Company, by T. L. Muller and H. N. Walter; Hamner Dry Plate Company, by J. K.

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Rose; Central Dry Plate Company, by H. H. Peterman, and California Card Manufacturing Company, by E. H. Stone.

In the evening the members sat down to the annual banquet. Between courses orchestral music and a number of beautiful songs were rendered. Speeches were indulged in by all present. After the banquet all adjourned to the ballroom and tripped the "light fantastic." One of the members discovered an organ, began singing, everybody joined, and soon a regular chorus was grouped around the organ. The hours passed so rapidly that it was quite late before anybody noticed it. Then somebody started "Home, Sweet Home," the entire crowd took it up; and, amid the singing, was brought to a close the largest and most successful Convention in the history of our Association.

C. H. GUTTER, Secretary.

How To Know Values

Taste is only to be educated by contemplation, not of the tolerably good, but of the truly excellent. I, therefore, show you only the best works; and when you are grounded in these, you will have a standard for the rest, which you will know how to value, without overrating them. And I show you the best in each class, that you may perceive that no class is so despised, but that each gives delight when a man of genius attains its highest point.—CONVERSATIONS OF GOETHE.

A MARCH MORNING
280

By CLAYTON W. MOGG

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A Wail From The East

DEAR MR. CLUTE:

You've made me mad, too. Good and mad. I've smashed last summer's crop of negatives and traded my Goerz, Series I, for a Brownie, same number.

A just howl has gone up from the Oregon hills. Sleeth's right. And I'm going to "sass" "ye" back, too. I'm mad, I tell you. Art is a lot of things. I can see that. I don't care, though, what it is, but I wish you would wise me up on this: What is the difference between art and a photograph? Wait a minute, don't answer yet; wait till I get through. I see pictures in the magazines labeled "Art." They are art, the mags. themselves say so, the "'steenth" salon show says so, and they are. Yet I cannot see it. I do not know art when I see it. That's all; so, Sherlock deduces thusly: Any picture that I do not like is art, and any picture that I do like is a mongrel; so, methinks, I'll enrich the world by making art instead of photographs.

I sent my art clean across the continent to let you drink of its nectar, to let you feel its poetic touch, to let you bask dreamily in its radiance, as it were. I'm not selfish.

I got them back before I hardly realized I had sent them. Yes, Brute,—I mean Clute,—they came back all right, and alas! they are not art at all, not even pictures, not worthy the name "Kodak" prints. "Rubbish, distorted ego, incipient insanity," thus saith the oracle at "Frisco." They are not art. I know that now. I knew it before I sent them to you. But they are not pictures, either. I do not like them. They're abominable, and so I thought they represented art. But, I'm not done yet, so do your worst; "Buckshot Bill, you shall not thwart me."

ODELL, of Watertown.

THE PLACE WHERE IT WAS MADE

By J. L. PARK

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STEREOSCOPIC DEPARTMENT

Some Hints On Mounting Stereos

By J. L. Park

The writer, having seen so many, many poorly mounted stereograms, is constrained to say something about his own method of doing the work. I find them mounted with one element higher than the other, the two elements not square with each other, and with the mounting properly done but the trimming uneven, the base lines of the two elements being dissimilar or not level. All these faults tend to cause poor definition and eye strain. My own method is ridiculously simple; in fact, so much so that I would not offer it were there not so many otherwise fine stereograms that come to me through exchange and in the traveling albums made bad by careless trimming and mounting.

Before starting to trim I turn each print over and make a couple of short parallel, horizontal lines across the middle of the back. In trimming, these short lines are cut in two, and in mounting I have only to see that the sides of the prints carrying these bisected lines are put to the outside of the mount instead of at the center, as when the lines were made, to be sure that the two elements are transposed in mounting. The next thing is the base line. I select a small, well-defined point that appears in the foreground of both elements, preferably near their centers; and, with a straight edge, mark for the trimmer with a sharp-pointed hard pencil, or trim with a trimming knife through these two points. Should there not be such a point located where the base line is desired, make one at a suitable distance from the lower edge by using a strip of white paper and a pencil and measuring downward from two like points further up in both elements. A piece of clear glass makes the best straight edge, because it enables one to see on both sides of the cutting line. I use a cleaned 5x7 negative glass for the purpose. The trimmed base line is now used as a base by which all the other sides are made square and true; and, that being done, it remains only to use care in getting both elements the same distance from and square with the bottom of the mount, and one is quite sure to be right.

As to trimming the sides, I know of no positive rule to follow. I have a glass trimming shape, three inches wide and of the proper height, with curved top. Using a glass-cutter, following by grinding off sharp points or rough cuts, such a form is easily made from an old negative glass. With the print before me, face up, and the base line already trimmed, I place the glass form on the left-hand print, the one at the left for the present, and shift it about a little until it covers what seems to be the most vital part of the picture, of course

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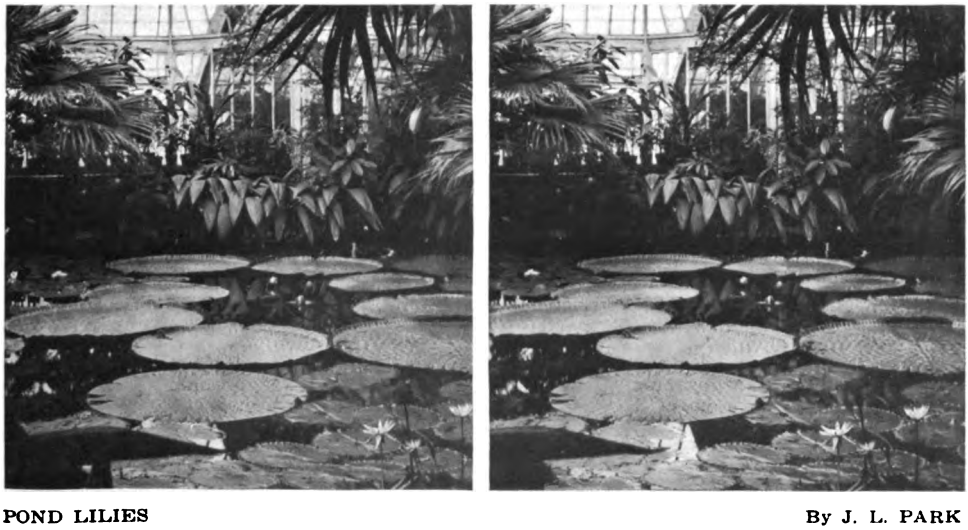
always keeping the base of the form exactly on the trimmed base line of the prints. Then I mark or trim around the form for that element. This is repeated with the print at the right-hand end, except that I try to get as much more at the right-hand side of the print as I can without trimming off any vital part from the left-hand side. There can be no hard and fast rule laid down for this. Generally, the left-hand element (at the left hand before being trimmed and transposed in mounting) should show more at the left side, and the other should show more at the right-hand side. This will be the case with a subject at some distance having planes running directly across the view. But we can photograph a row of trees at an angle to and to the left of the camera, let us say, and in the print the right-hand element will show, within the three-inch space, more at both ends of the row (both sides of that element) than will the other element.

As to the proper size of the stereo elements, the "orthodox" measurement calls for three inches in width so as to have not over three inches between like points in each element, and it is the rankest of rank heresy to think otherwise. But it is often a question of sacrificing desirable detail or subject matter at the sides as against sacrificing exact magnification, and I often decide for the latter. Some of my interiors I have trimmed three and three-eighths inches wide, and three and three-fourths inches high; in fact, nearly all my interior and architectural stereos are trimmed this greater height, thereby preserving much valuable detail that would otherwise be lost. A four-inch mount is of course made necessary. To me, it seems that this is a question for each worker to decide for himself.

Before closing, I desire to disclaim any technical knowledge of stereoscopy. What I have set down is simply the result of my experience, results arrived at after many mistakes. It may seem somewhat unimportant to experienced workers; but, had these few hints been given me at the beginning of my stereo-making career, I would have avoided many mistakes and saved no small amount of prints, mounts, and labor.



POND LILIES

By J. L. PARK

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

BORING HOLES IN GLASS: Do not try to bore holes in glass with a drill made of steel. Use a small piece of copper tubing in the drill brace, and apply turpentine and emery powder to facilitate the cutting.—H. E. Blackburn, Pennsylvania.

SUBSTITUTE FOR A STICK: Instead of using a stick to move prints about as they are placed in the fixing bath, use a small dish mop such as can be bought at any hardware store for five cents. Being made of soft cotton twine, it can be used the same as a stick, but without any danger of scratching the prints. It is very handy and you are always sure your fingers are free from hypo. I have used one for six years with the greatest satisfaction.—Edgar O. Spaulding, Maine.

MAKING A PLASTER CAST OF A NAME: Take a piece of tough paper, lay it down on a sheet of soft blotter or a piece of chamois skin, and then, with a smoothly rounded pencil point, write the desired name thereon. Turn it over, take some waterproof varnish without pressing hard thereon to destroy the relief. Mix up some plaster of paris and pour over. When dry you will have a mold from which the writing or drawing can be cast in relief in any metal. The varnish is applied to prevent the damp plaster from softening and destroying the relief.—Henry L. Dillon, Pennsylvania.

CUTTING MASKS: Take any scraps of thin cardboard or hard, thick paper and, with your print trimmer, cut pieces the size and shape of the openings desired. Locate these on the mask papers just where the openings are desired and fasten in place with several touches of glue. After the glue has set, cut around the outside of the card with a sharp, thin-bladed knife. A little practice will make it all very simple, and there is no danger of the pattern or "straight edge" slipping, or of the corners not being perfectly square if the print trimmer cuts true, as it should.—W. H. Blacar, Maine.

DEAD BLACK PAINT: The best paint for the inside of cameras, lens boards, and the like, is composed of shellac dissolved in alcohol to which is added a large proportion of lampblack. If there is an excess of shellac, the paint will dry with a gloss, which is undesirable. What is wanted is a smooth, dead black surface, and that is obtained by using just enough shellac to prevent the

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lampblack rubbing off, and no more. A few trials will enable one to determine the proper amount to use; and, this determined, one has a paint that cannot be excelled for the purpose.—B. B. W., Indiana.

FOR DRY MOUNTING: Put one vessel inside of another filled with water, as the ordinary glue melting pot is constructed, so that the contents of the inner vessel may be brought to a high degree of heat without danger of burning. In the latter put eight ounces of water and five drachms of borax and one of sodium carbonate. Boil about five minutes until the two are dissolved; then, stirring constantly, add two ounces of finely powdered white shellac, boiling slowly for about an hour, or until the shellac is thoroughly dissolved and incorporated. Then strain through cloth into a wide-mouthed bottle that can be kept tightly corked. The mixture will keep indefinitely if well corked; but, should you find, on using, that the shellac has crystallized out a little, again heat and stir until dissolved, adding a little more water if necessary. To use, place print face down on a sheet of paper; and, holding it by one corner, apply a liberal coating of the solution with a stiff brush. It will dry in about ten minutes, after which it can be trimmed, placed in position on the mount, and ironed down with a hot iron. The iron should be hot enough to sizzle a little upon application of a wet finger-tip, then used to iron over a piece of brown paper on both sides, and finally the brown paper placed over the print and the latter ironed into position. The mounted pictures must not be bent while hot or they may crack loose. Using this mounting permits one to mount prints on the thinnest paper without cockling.—E. H. R., Michigan.

SPOTTY NEGATIVES: Gelatine is like a sponge. If you do not believe it, put a piece in some water and see how it will swell. When you develop your plate or film, you swell up this sponge-like surface, and when you let water run on it to wash it, you are using this emulsion surface much as you would use a sponge for a filter. Just run water from your tap through a sponge for a while and see how soon it becomes foul with slime and grit, even when the water appears quite clear and clean. Your gelatine emulsion is even more inclined to catch and hold dirt than is the sponge, when we consider the surface alone, because the emulsion is too dense to allow the dirt to penetrate as it does in the sponge. The consequence is, when the average plate or film is done washing, its emulsion surface has collected a good surface coating of dirt and grit, the amount depending upon the clearness of the water and the duration of the washing. The thing to do, then, is to take a tuft of wet cotton and give the emulsion a good cleaning before placing the plates or film to dry. Give it a good rubbing so as to dislodge heavy particles that have become imbedded in the surface. You will, in some cases, be able to remove such an amount of surface dirt that an unscrubbed part shows plainly as of a dirty gray color. But you will be surprised at the improved character of your negatives after they are dried, if you will make a practice of doing as advised, after washing and before drying.—Charles E. Rau, Iowa.

THE EMULSION SIDE: In the April number I ran across a paragraph by T. P. Pettigrew, on loading holders in the dark. I have loaded mine in that way many times; in fact, sometimes do so in my own dark room. When

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a freshly opened box of plates is being used, it is not difficult to avoid getting the wrong side of the plate to the front, by simply following the order in which they are packed. But with a box that has been opened there is chance for a doubt. I moisten my thumb and forefinger and grasp the extreme corner of the plate, holding it for a few seconds. The side carrying the emulsion will stick to the thumb or finger, as the case may be, thus identifying the side to go up in the holder. This test was given me by a traveling photographer some ten years ago, and it since has come in very handy on many occasions.—A. C. Ames, Ohio.

DEVELOPING AUTOCHROMES: Autochrome plates may be developed in a tank, using the regular tank formula, reversing solution as given by the makers of the plates, and then redeveloping in the original tank solution first used. I have used, with most gratifying results, the following formula:

Erogen	55 grains
Sodium sulphite, (dry)	80 grains
Sodium carbonate, (dry)	80 grains
Water	40 ounces

Add about forty drops of a ten per cent solution of potassium bromide. The above requires twenty minutes at a temperature between sixty-five and seventy degrees. For two-and-one-half-minute developing in a tray, in the dark, I use:

Erogen	50 grains
Sodium sulphite, (dry)	300 grains
Bromide potassium	20 grains
Ammonia, (16 U. S. P.)	100 minims
Water	10 ounces

In my hands, the above seems to give more latitude in the exposure than does the developer recommended by the makers of the plates.—C. Willard Evans, California.

BRUSH DEVELOPMENT FOR BROMIDE AND GASLIGHT PAPERS: I sometimes wonder how many users of gaslight and bromide papers employ a brush in developing. I consider brush development far more simple and convenient, and it is certainly more economical than the usual way of plunging the print into a tray full of developer. One requires a camel's hair brush two or two and one-half inches wide, and a sheet of glass on which to lay the print to be developed. The brush need not be rubber bound; for several years I have used the ordinary tin-bound ones with perfect satisfaction, and they cost much less. However, the metal part should be kept out of the developer as much as possible and well dried when putting the brush aside in order to avoid rust. Put a little developer in a saucer, slightly moisten the surface of the glass so that the print will not slip about, put the exposed paper on the glass, face up, and place with one end in a tray so that it slopes slightly. Then take up a little of the developer on the brush and quickly and evenly spread it over the surface of the print, and repeat until fully developed. The print can be picked up and examined in a stronger light to determine if development has been completed, and one can apply more developer as the print lies in the palm of the hand, if thought advisable. It is not as generally known as it should be that

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a rightly timed print on gaslight paper will come up to the right density and then practically stop; and besides, it is only by this taking care to rightly time the exposure that the best possible prints are secured. The fingers should not be allowed to touch the film surface of the prints, or spots are almost sure to result. Bromide papers are not so prone to stains, and longer development being allowable, more leisure can be employed in brushing on the developer. The glass and brush should be thoroughly cleaned each time after using.

Briefly summarized, the advantages of the brush method are: Greater control, less developer needed, fewer trays required, entire absence of white spots caused by bubbles and air bells, and uniformity of tone, because each print is developed, practically, with its own fresh brushful of developer. Using this method, I have developed all sized prints from the smallest contact sizes up to 18x22 bromide enlargements. With the latter the method effects quite a saving in large trays and the requisite large amount of developer. With the bromide paper there is plenty of time to go over the surface, as the image does not come up so quick or development finish in so short a time. With the gaslight papers there is quicker work; but, as I explained above, correct timing of the print will make it practically impossible to secure streaks or markings. I have frequently explained this to fellow workers by developing one end of an exposed sheet until the image was well out before putting any developer on the other end, and then bringing the print up evenly and without hardly a variation between the two halves. This test is much more trying than anything that could happen in the regular use of the brush. Of course, where the exposure has been so long that the print must be whisked into the fixing bath in order to prevent its being developed too far, carelessness in going over the print with the brush at the first will perhaps result in uneven development.—L. T. M., Illinois.

TANK TIME WITH DIFFERENT DEVELOPERS: The following method of calculating the time for tank development will often come in handy when one is away from his base of supplies and happens to be with a friend who is using a different make or size of tank than himself. Or one may have two different tanks, and, wishing to use one of them, find that he is out of powders. In this case he can use the powders intended for the other tank, with just as much confidence as though they were made for the tank in question.

Three well-known laws involved in the tank method of development are: (1) Time of development varies inversely with the temperature; (2) time of development varies inversely with the strength of developer; (3) strength of developer varies inversely with volume of developer. Combining these three laws, we get: Time of development varies as the volume and indirectly as the temperature. Now, if we have a tank and a powder for the same, we can find the time of development when using this powder with any other tank, from the law stated above, provided we know the capacity of the two tanks and the time and temperature for which the powder is intended. The last two are printed on the powder; but, unfortunately, the only way to obtain the first is by actual measurement. If manufacturers would give the volume of the tank for which a powder is intended, it could be adapted to any tank, and when buying such

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powders one would not have to designate any special powder. In making use of this method, therefore, you must borrow the other tank in order to measure its capacity. The two following examples will make the method clear: We wish to use a powder intended for a 4x5 Premo Filmpack Tank in a 4x5 Eastman Plate Tank, at a temperature of sixty-five degrees, and want to find the time of development. These powders are "twenty-minute" powders at sixty-five degrees. The volumes of the two tanks are found to be, by actual measurement: Filmpack Tank, 52.10 ounces; Plate Tank, 26.75 ounces. As the temperature is the same for both cases, it can be neglected, so that we have the following ratio: 52.10 :26.75 : :20 :x, where x is the time required. The time will be found to be 10.2 minutes, or, practically, ten minutes. Should we desire to use Plate Tank powders in the Filmpack Tank, the ratio would be: 52.10 :26.75 : :x :15, these powders being "fifteen-minute" powders at sixty-five degrees. Here x will be found to be practically thirty minutes, but for reasons stated in the next paragraph, the time of development should be reduced to at least fifteen minutes, which is the time given on the powder. On trial, we find that it will take two powders to do this, two powders giving fifteen minutes, which, in this case, accidentally turns out to be exactly the same time as that given on the powder.

It must not only be self-evident, but it has also been proven by experiment (see articles in various photographic magazines. I think a recent issue of CAMERA CRAFT contained an article on the subject) that there is a point in the dilution of a developer where, if the dilution be still farther increased, the result will be an absolute failure of the developer. If such be the case for all developers in general, how much more so will it apply to pyro, which is quick to oxidize, and which is generally used in developing tanks. Now, as only the maker of a developing powder can tell how near his powder is to the danger point with reference to its degree of dilution, the user, to be on the safe side, should not increase the dilution; though he can, if he wishes, decrease it to advantage. Since the time of development varies with the dilution, it follows that the time of a given powder should not be increased, but may be decreased; that is, the time of development serves as a guide to indicate whether dilution has increased or decreased. In the above case the time was increased, so that the dilution was increased in the same ratio, and to bring the dilution back to its original degree, we must reduce the time of development to its original value. By trial we find that it will take two powders at fifteen minutes. If three powders were used, the time would be ten minutes.—D. A. Tyrrell, California.

The Gospel of Art

Work thou for pleasure; paint or sing or carve
The thing thou lovest, though the body starve.
Who works for glory misses oft the goal;
Who works for money coins his very soul.
Work for the work's sake, then, and it may be
That these things shall be added unto thee.

KENYON COX.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, JUNE, 1911 No. 6

Shop Talk

Our "Shop Talk" was crowded out last month, and we were really glad of it. There was nothing to say, at the time it was written, concerning the proposed "advisory board," because it was too early for replies to be in our hands. We wrote something under the "Shop Talk" heading, but when done it sounded rather flat and insipid, even for us, and so we were glad when we found other editorials demanding the full three pages. But we have had a most gratifying number of readers offer to assume the duties of a member of the advisory board. There are, of course, not a full fifty, or forty either, so there is room for more. But the plans suggested: most of them left it to ourselves, but one writer seems to have evolved the most practical idea. He says: "It is evident that what you want is some means of feeling the pulse of your readers. Forty or fifty of them could be trusted to give you about the same general opinion, on any subject connected with the magazine, as would be obtained from the entire subscription list. Therefore, all you have to do is to put the name and address of your board members on a mailing list and once a month send out a mimeographed letter to that list and await the replies. I am sure that you can find quite a number who would be only too glad to show their appreciation of CAMERA CRAFT by obligating themselves to reply to such a letter each month. The getting together of the opinion of such a number of readers on any specific point concerning the magazine would be of the greatest possible value to you, as the publisher thereof." So we will accept that as the plan on which we start, reserving, of course, the right to change or modify it as experience may indicate as being advisable. But we want more members on the board. Drop us a line and express your willingness to write a reply to our mimeographed letter each month, giving your candid opinion concerning matters connected with the publication of the magazine as are submitted therein. All letters received will be considered confidential and their contents not published except as an occasional extract is used, and then without the use of the writer's name. You will enjoy the writing of a letter each month, we feel quite sure. As one of the volunteers for a position on the board wrote: "If you mention the matter again in the magazine, you might remind the laggards that the stimulus and benefit they will derive from the effort to organize, on paper, their ideas on any given subject, will be well worth while. Personally, I expect to gain more in that way than it will be possible for me to render in the way of assistance in improving the magazine." And we believe any reader will find this the case. Send in your name and reap the benefits before the board becomes overcrowded.

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The Pacific Northwest Convention

The Eleventh Annual Convention of the Photographers' Association of the Pacific Northwest will be held at Tacoma, Washington, September 5th, 6th, 7th and 8th, the meeting place being Columbia Hall, Ninth and Tacoma Streets. While the usual convention features will be presented as strongly as possible, the business end of the photographic profession will have the special attention that its importance demands at this period, when the rapid advancement of the technical and artistic has somewhat left business methods undeveloped. The slogan of the coming convention will be "Camera and Cash." The matter of advertising, securing publicity, making displays, together with employment of system in recording work; keeping of accounts, and the like, will be dealt with by men qualified to instruct. On the practical work, the use of the air brush will come in for a most thorough explanation. The entertainment end is in good hands, the Tacoma Club, and there will be a minstrel show, a clam bake on the beach, and other features particularly inviting. An unusually large display by the manufacturers and dealers has been promised. All in all, the coming convention is to be one that no photographer in the Northwest can afford to miss. Further announcements will be made in our pages, and full information can be secured from J. E. Ralston, Secretary-Treasurer, 416 Epler Block, Seattle, Washington.

A Diamond Medal and The Indiana Convention

The Indiana Association of Photographers is putting up a handsome diamond medal to be awarded at its Sixteenth Annual Convention, to be held at Winona Lake, July tenth to thirteenth, inclusive. The competition calls for a print of any size or style, and any number can be sent, to be framed, and to be sent to J. E. McLain, care Indiana Association of Photographers, Winona Lake, Indiana, on or before July sixth. It is open to all the world except Indiana photographers. It will no doubt bring out a handsome collection of work from the best workers throughout the country, and our readers who are engaged in professional portrait work should take the opportunity of trying for so handsome a trophy. Every photographer in Indiana should make it a point to attend their State convention this year. All particulars can be obtained from E. K. Shalley, Secretary, Berne, Indiana.

Let Us All Help

As promised in our editorial last month, the matter of advertising the Pacific Coast and the coming Exposition by means of post cards to be circulated by the amateurs of this section, was turned over to the California Camera Club for action. The matter came up at a regular meeting, but no decision was arrived at further than to lay the matter over for further consideration. That element of the club that is long on dignity and short on doing, contended that the club could hardly accept a suggestion coming from outside itself, and it was thought best to return the communications without comment, and later, father some plan as originating with the club itself.

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The National and Other Conventions

Did you ever stop to think that the National Convention, as it is today, is the sum total of the time, money and labors of innumerable broad-minded men, who, without thought for themselves, have freely given of their best efforts to bring about a better condition of affairs in professional photography? They have taught what they knew so that those less gifted or less fortunately situated might profit thereby. They have not done this in order to carry off the honors and glory. And, really, there is very little honor for those who conduct the affairs of the National—as a rule, it is mainly a lot of hard work. Get the idea firmly fixed in your mind: The National Convention is conducted solely for the benefit of those who make their living by photography; not the few, but every man in the profession, whether he be in Alaska or out on the Florida Keys (if there are any photographers there). The influence of the Convention is felt throughout the country even though it be attended only by those within a thousand miles.

The Convention of the P. A. of A. could never have lived through thirty-one years, growing stronger and better each year, if it had not had real purpose, sincerity and usefulness back of it.

At the St. Paul Convention you will have, not only the efforts put forward by this year's board, but the result of the efforts of all previous boards. You get the very cream of everything worth having at that Convention. The School of Photography has progressed in excellence until this year you will have the master photographer of the world as your instructor. Rudolf Duhrkoop's work has been shown in this country even more frequently than that of our own leaders. Abroad, he is universally acknowledged a leader. It speaks much for our National Association that Duhrkoop makes the long trip across the water to show us how he achieves his successes. And Duhrkoop is modest; he says he has all admiration for the methods of our American photographers—merely that he does these things in a different way. But it is that different way that we all want to learn.

And Duhrkoop's lessons will only be a part. You will come to see him, of course; but you will see other attractions full of interest and instruction. Leslie Miller, the director of the most successful school of industrial art in the country, will talk to you about portraiture, sane portraiture, showing you the lessons to be learned from the old masters, illustrating his remarks by slides. Mr. Williams, the President of the Royal Society of Miniature Painters, is another who will talk on the art side of our business, and he has the reputation of being a most gifted man and teacher.

Our own William Rau, of Philadelphia, Ex-President of the Pennsylvania Society, will lecture on his experiences as a commercial photographer. Mr. Rau has one of the best equipped establishments for the making of photographs of everything under the sun. The wonderful station of the Pennsylvania Railroad in New York is decorated with monster transparencies, the work of Rau. He, too, will illustrate his talk, and it will be intensely interesting, not only to the commercial men, but to all photographers. Advertising, successful advertising, is the very breath of modern business, and an illustrated talk on that subject will give you many pointers.

Little need be said about the exhibition of pictures. You all know that it is the show of the year; that by it, reputations fall and rise. There will be no prizes, and, of course, no jealousy. National Convention entertainments are handled on a large scale and there will be full justice done this year. The Twin City photographers have accumulated funds for the purpose and are going to do themselves proud. The women photographers of the country, in their own Federation of Women Photographers, will have an exhibition most interesting.

The Congress of Photography will call

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together the thinkers of the profession. Many weighty problems are before them this year, and their meetings will be unusually interesting. The Academy of Photography is a matter that will come before the Convention this year. Every thinking photographer must be intensely interested in founding it on a fair and impartial, yet solid basis.

After the Convention, should you so desire, you can take a trip through Yellowstone Park, where all the wonders of nature seem to have been accumulated. It is to be a special trip for photographers, and the expense will be small. You may never have such a chance again, so consider the matter well.

The manufacturers will have the finest display ever shown. The National Convention has been held in many fine buildings, but never in one so admirably suited to its purposes as the St. Paul Armory. And the manufacturers are going to take advantage of that fact.

So don't consider distance, or expense, or time. Just make up your mind that you are going to St. Paul in July and that you are going to make the most of your opportunities. It will be big money in your pocket. Did you ever stop to think that the big men in professional photography have all been good convention men? There's a moral in that.

THE INDIANA CONVENTION AND THE GOLD MEDAL

There is a beautiful diamond medal, costing one hundred and fifty dollars, to be awarded at the coming Indiana convention, the competition being open to the world, except to Indiana photographers. Only one picture is required, and it must be at the Convention July 6th. Many of the best photographers in the country have promised to compete, and it will be worth the time of any Indiana photographer to visit and inspect an exhibition such as the competing pictures will make. And any photographer in the country is missing the chance of the year if he fails to send in a picture for the competition. Get your picture ready and send it to J. E. McLean, care Indiana Association of Photographers, Winona Lake, Indiana. There is no restriction as to size or number sent, but entries must be framed and at Winona Lake before July 6th, marked "For Diamond Medal Competition."

But there will be many other valuable features to the Convention. Two of the best photographers in the country, Sykes of Chicago and Towles of Washington, will give demonstrations under the skylight. Holloway and Larrimer, both old National Convention men, will show you how to make enlargements, the kind that will have you guessing whether they are enlargements or contact prints. President Harris of the National will tell you about the business side, the business of putting money into the bank, in particular. There will be an illustrated lecture on advertising, and by a man who is capable of helping you some more with that same bank account, Juan C. Abel of *Abel's Weekly*.

The 14th, the next day after our closing date, Glenn Curtis will be at Winona and make two flights; one from land and the other from the surface of the lake, using the aeroplane in which he made his sensational landing on the deck of a battleship in San Francisco Harbor, a fitting aftermath of a Convention that our Indiana photographers cannot afford to miss. The date, July 10th to 13th, inclusive. On the 14th is the aeroplane flight, so arrange to stay over for that. There will, of course, be plenty of space for the exhibition of work by members, so get your exhibit ready and make your arrangements to be there. It is an opportunity that you cannot afford to miss.

E. K. SHALLEY, Secretary,
Berne, Indiana.

BE SURE TO SEND FOR ONE

The publishers of "The Complete Self-Instructing Library of Practical Photography" have gotten out a handsome new prospectus, one showing sample pages, samples of the paper, reproductions of prize winning made by owners of the books, portraits of a small army of prominent photographers who contributed to the books, and much other valuable information. A cut of the cover is shown herewith. Most important of all is a special "Approval Order" coupon attached to the inside back cover of the booklet. But why waste words; send for a copy. Address, American Photographic Text Book Company, 350 Adams Avenue, Scranton, Pennsylvania.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

REPAIRING SHUTTER BLINDS

I tried the following method, writes Mr. Charles Cox in *Photography and Focus*, of stopping up the pinholes in the blind of a roller-blind shutter, and after six months' use I find it still very good. The blind was given a thin coat of rubber solution on both sides, rubbing it well in. This was allowed to dry for half an hour or so, and the coating repeated several times. When I was satisfied that I had coated it sufficiently I rubbed the dry coating with powdered lamp black, which prevents the blind from sticking together and at the same time gives it a perfect finish.

DEFECTIVE DEFINITION FROM USE OF COLOR SCREENS

If color filters be used with a lens it is clear that considerable attention should be paid to the optical accuracy of those filters, so that they do not introduce aberrations which may affect the definition of the image. Apart from the accuracy of the glass itself, distortion may be produced in color filters in the course of their manufacture in several ways.

In the first place, if the filters are prepared by coating colored gelatine upon the glass, then when this gelatine dries it will contract and bend the glass; also, when the filter is cemented with Canada balsam, too rapid drying or drying at uneven temperatures will distort the filter; while, finally, if pressure is exercised upon a thin filter in its cell, the filter may easily be permanently strained. If these strains were symmetrical they would be of small importance, as they would simply produce a lens of slight positive or negative power, and so, to a small extent, change the focal length of the lens with which they are used. But generally they are either in one direction only, or are much greater in one direction than in the other, and so produce a cylindrical lens, which introduces astigmatism. The effect of such aberration naturally becomes much greater as lenses of longer focal length are used, the effect varying as the square of the focal length of the lens, so that a filter which would be perfectly satisfactory on a hand camera lens of six inches focus, would be with a telephoto combination quite useless. With medium and high power telephoto lenses only filters of the highest optical accuracy can be used.

This point must be carefully borne in mind, in view of the recent introduction of what may be termed semi-telephoto lenses, which naturally require that a filter should be far more accurate than would be assumed to be necessary for its diameter.

The aberrations of filters can be minimized by making them of as thick glass as possible, having regard to its optical accuracy, and for filters of the very highest quality it is usual for the two glasses to be about five millimeters in thickness.—Dr. C. E. K. Mees, in *Knowledge*.

NON-INFLAMABLE FILMS

I have previously announced the discovery of substitutes for celluloid that to its good qualities add the most important factor of non-inflammability. The actual preparation of such a substitute is described in the patent specification of Doctors Waldemar Merckens and Haigasun Barsam Manissadgian (*Vide. British Journal of Photography*). The directions are as follows:

One kilo. of cellulose is mixed with two litres of pure anhydrous acetic acid, to which fifty cubic centimeters of sulphuric acid monohydrate and the same quantity of phosphorus oxychloride are added. As soon as a thin paste is produced, about three kilos. of acetic acid anhydride are slowly added while the paste is being cooled. As soon as all the cellulose has dissolved, one-fifth litre of ten per cent phosphoric acid (nine hundred parts of water and one hundred parts syrupy phosphoric acid) is added. This is allowed to stand for ten to twelve hours, and is then precipitated with water.

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This material is suitable for the manufacture of everything that heretofore has been made out of common celluloid; for example, for the manufacture of combs, moulds, dies, forms, etc. The plastic material is absolutely transparent, while its durability is assured owing to the fact that the components, as the sulphacetates, phosphacetates, etc., and the esters of phenols, cresols, or naphthols, etc., are quite stable substances.

NEW POINTS IN DEVELOPMENT

In the paper on "The Fogging Power of Developers," by Dr. C. E. K. Mees and Mr. C. Welborne Piper, which was read at the R.P.S. last Tuesday, several interesting and important facts were elucidated, chief among which we may place the one that sulphite of soda in the hydroquinone developer is a powerful cause of fog. As we have several times pointed out in these columns, fog is far too prominent a feature in the average modern negative, and we have heard many complaints from trade printers with regard to the quality of the amateur negatives sent to them. In all cases the complaint seems to be the same. The negatives are too foggy, and too weak in contrast to render good prints. The authors of the paper referred to above point out that with quantities of sulphite such as are commonly used a maximum fogging effect can be produced, while bromide loses all control over the fog in a development of ten minutes. Apparently, then, the only way to minimise the fog is to cut the development short, and the attempt to strike a means of safety produces the very results of which we hear so many complaints. The experiments recorded in the lecture were confined to the hydroquinone developer, and while this is not very generally used in its simple form, yet hydroquinone in conjunction with metol is perhaps the most popular developer of the day. It is a comparatively modern developer, and possibly its most popular predecessor was pyro soda, in the days of which we heard few complaints with regard to fog. Many good workers still keep to this developer, and we believe they meet with little trouble from fog, even though they use sulphite. We understand that the effect of sulphite with pyro has not yet been tested by Messrs. Mees and Piper, but it is interesting to note that Messrs. Hurter and Driffield, in one of their papers, stated that sulphite appeared to have no effect. If this is confirmed, then it will seem that sulphite fog is more or less peculiar to hydroquinone, and that the general use of this particular developer with sulphite is responsible for most of our troubles.

* * * * *

Another very interesting point brought out by the authors of the paper on "Fog" is the fact that a developer containing hydroquinone and caustic soda alone, and without any sulphite or bromide, gives neither stain nor fog if the hydroquinone is in large excess. Further than this, it appears to greatly increase the speed of the plate. These very material advantages are counterbalanced to some extent by the fact that it is incapable of giving any great contrast even when development is very long. Possibly, however, this apparent disadvantage may really be an advantage, for a developer that raises the plate speed, and yet will only give a soft result with prolonged development, should certainly have advantages in the case of high-speed shutter work, and intensification will always remedy want of contrast. The fact that this developer works at all satisfactorily affords a confirmation of what we said in a note last week with regard to the little that is known about developers, for possibly no one would have anticipated that a developer without either sulphite or bromide could be both non-staining and non-fogging. Two very common fallacies are also disposed of by the results given in the lecture. Most practical workers would probably assume that a large excess of alkali would increase fog, whereas it appears that it has absolutely no effect on fog. Again, others would be likely to assume that greater contrast would be assured by increasing the proportion of hydroquinone, whereas it appears that the direct contrary is the case, a greatly diminished contrast being the natural result of an excess of hydroquinone.—*British Journal of Photography.*

SIZE OF PARTICLE AND COLOR OF IMAGE

Mr. Chapman Jones's recent paper before the Royal Photographic Society, was the epitome of long-continued and most useful research upon the determining factor in the formation of color in the photographic image. His conclusion is that the distance apart of the silver particles embedded in the

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gelatine film has nothing to do with it, and that the color effects are independent also of the rate of development. They are determined solely, in his opinion, by the average size of the particle, the enlargement of which always affects the color of the film. Mr. Chapman Jones has enlarged the silver particles by means of mercuric chloride and ferrous oxalate, and has succeeded in getting, according to the degree of enlargement, a gamut of colors ranging from yellow to purplish grey. The same sequence of color has been obtained over and over again. His further conclusion is that the diameter of the particle bears a certain relationship to the wave-length of the light which is scattered. When the particle only represents in diameter a quarter of a wave-length in the ultra-violet, no color effect whatever is obtained; but when it becomes equal to half a wave-length, certain color disturbances begin to be manifest. His theory, put forward tentatively, is that an obstruction in the shape of a minute particle of half the length of a particular wave in diameter may stop or dampen that wave while leaving waves of other lengths untouched, thus accounting for the differences of tint. In short, the light is scattered by particles approximating in diameter to half a wave-length of the scattered light.—*Amateur Photographer.*

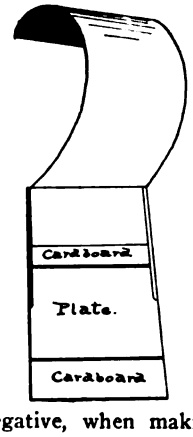
SLIDE MAKING WITH A REFLEX CAMERA

S. J. Taylor, writing in *Photography and Focus,* describes how he employed his reflex for the above purpose. He says:

I first made an extension piece to slide on to the front, in place of the rising panel. It is constructed of wood and strawboard, blacked inside and out. The front of the extension piece has a circular hole cut in it of the size of the lens, which, with its sunk mount and square metal plate, simply slips in, and is held in place by two flat springs which press the plate against a square of black cloth glued to the front. This simple device has proved quite light-tight in use. The extra extension obtained is about five inches.

My plate-carrying device is the Mackenzie-Wishart slide with celluloid envelopes for the plates, and here again the adapting of the slides to carry lantern-size plates is simple. If a piece of stout black paper, 4¼x3¼ in size, has a slip of cardboard half an inch wide glued across each end, the space in the middle is three and a quarter inches square. The lantern plate is laid in this space, and the whole slid into the celluloid sheath, in which the overturned edges hold it quite securely.

The top screen, as is customary with reflex cameras, is square, and marked off by cross lines for upright and horizontal pictures. This leaves a square of three and a quarter inches in the center of the screen, and as the lantern plate is also in the center of the field, whether the reversing back is upright or horizontal, the picture can be adjusted to cover exactly as much or as little of the lantern slide as may be chosen.



A convenient way of illuminating the negative, when making slides, I find, is to remove the front part of an enlarging lantern, put the negative into the carrier, and simply photograph it, with the lantern, of course, alight. It is easy to secure perfect illumination of the negative, and the light is so brilliant that one can use a very small stop and secure maximum definition without making exposures unduly long. For black-toned slides, with f/16 and an average negative, fifteen seconds to a minute will be sufficient, according to the make of plate used.

FOCUSING IN DARK INTERIORS, NIGHT SCENES, ETC.

One hesitates to say that anything is new in photography; but I think I shall be well within the mark if I prophesy that the plan I am about to describe will prove new to at least ninety-nine per cent of present-day workers.

Now, when dealing with very dark interiors or night subjects, it is practically impossible to see on the ground-glass any but the parts of the subject which happen to be conspicuously light as contrasted with their surroundings. For example, in a dark interior one can sometimes see to focus a dark bench-end or bit of open iron work by putting behind these objects a piece of white paper or one's handkerchief.

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Again, one sometimes can employ the flame of a lighted candle to focus on. Indeed, one really needs two such candles, one of these being placed in the immediate foreground, while the second is put at the more distant part of the building which is included in the picture. But if this second candle-flame be further than, let us say, ten yards, its image on the ground-glass is likely to be so small that it is not of very much use in this connection. What I would suggest is the idea of focusing by distance with a large stop rather than by the ground-glass and a small stop.

Let me explain what I mean by the aid of an example. Suppose the view selected is a dark interior, and includes objects extending from five to twenty feet (or yards) away from the lens. It is highly probable that with a stop large enough to see the darkest parts of the subject it will not be possible with an everyday focal length to get a subject from five to twenty feet in focus at once.

The question arises: On what part must one focus as sharply as sight permits so as to get the nearest (five feet) and most distant parts (twenty feet) equally sharply defined?

While this may not give all parts as sharp as it is desired to have them, yet it will give the best general effect, so that any want of sharpness will be least noticeable under such conditions.

Happily, the question of the point to focus on is very easily answered, and the arithmetic can often be done in one's head. In the case imagined we multiply 5 by 20, getting 100, then double this, *i. e.*, 200. Next we add 5 and 20, getting 25. Now divide 200 by 25, getting 8. If then we place any easily seen object at eight feet from the lens, and focus this with the largest stop, we now know that by using any smaller stop the near and far points, *i. e.*, 5 and 20 ft. distance, and, of course, all in between them, will be equally sharp or unsharp, as the case may be.

To make the estimation of the focus point quite clear, let us take another instance. Suppose now we wish to deal with a night scene, where the nearest object is ten yards and the most distant part is forty yards away. We multiply 10 by 40, getting 400, and double this, getting 800. Now add 10 and 40, getting 50. Divide 800 by 50; we get 16. Thus we set our focusing scale at 16 yards, and use the smallest stop which our patience will suffer when we take into consideration how long the exposure must be. We can now formulate a rule which is easily remembered, calling the distance of the nearest part of the scene N and the furthermost part F.

Our rule may be thus stated, "Divide twice the product of N and F by the sum of N and F," or expressed as a formula it is $\frac{2N \times F}{N + F}$

The following table may be useful to those who fight shy of arithmetic:

	Most Distant Object							
Nearest Object	10	15	20	40	60	100	150	200
5	6⅔	7½	8	9	9¼	9½	9 2-3	9¼
7		9½	10½	12	12¾	13	13½	13¾
10			13	16	17	18	18 2-3	19
15			17	22	24	26	27	28
20				27	30	33	35½	36½
40					48	57	63	66
50						75	86	92
100							120	133

In many cases the figures are approximations, but they will be found to be sufficiently accurate for all practical purposes.

It will, of course, be understood that the above table applies to feet or yards, as our convenience may dictate. One example taken from the table may suffice. Suppose we are dealing with a subject where the nearest object is fifteen feet away, and the most distant object is sixty feet away. In the left-hand column we look for 15, and follow the corresponding horizontal line till we come to the distant object column headed 60, and where these two columns meet we find the number 24, which gives us the distance of the object on which we focus.

Some of our older readers may, perhaps, remember the days when the conventional rule was to divide the distance between the nearest and most distant object into three equal parts, and then focus on the nearest of the three imaginary divisions, but a glance at the above table will show that this old rule was faulty. For example, suppose the nearest object to be ten yards and most distant one hundred yards, the interspace being, therefore, ninety yards. Dividing this into three equal parts, the nearest of these divisions would be thirty yards behind the ten yards object, or forty yards from the camera; but a glance at the table shows that the point to focus on is eighteen yards, which is very different from forty yards.—F. C. Lambert, in *Amateur Photographer*.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

COATING FOR CARBON SUPPORT

An Oregon correspondent asks for a formula for coating paper for single transfer support, and also for coating final support. For the first, swell sheet gelatine in water, one ounce of gelatine in twenty ounces of water, for about an hour. Then melt in a water bath, employing a temperature of about one hundred and eighty degrees Fahrenheit, finally adding twenty grains of chrome alum dissolved in one ounce of hot water, drop by drop, maintaining the temperature and stirring constantly meanwhile. This should be brushed over the paper whilst quite warm, and the paper hung up to become thoroughly dry. For coating the final support, proceed as above, except that the chrome alum should be increased to seventy-five grains and the water in which it is dissolved increased to two and one-half ounces. This can be applied to the final support with a brush the same as the other, but a better plan is to immerse the carbon print in the warm solution, bring it in contact with the final support, and then squeegee.

TO FIND THE FACTOR FOR YOUR DEVELOPER

An Iowa correspondent wants to know how he can determine the factor for his favorite developer, one composed of hydroquinone and metol. Watkins' Manual gives the following directions: The factor is, approximately, the average of the two constituents, if in equal parts. Thus, with hydroquinone 5 and metol 30, the average would be 17½. But if the combined developer contains two parts of hydroquinone to one part of metol (three parts in all), you put down the factor for each of the three parts and divide by three. Thus, with the above one adds 5 and 5 and 30, and then divides the sum, 40, by three, giving 13⅓. With pyro, as with amidol, the factor varies with the strength in grains to the ounce, but with all other developers, as far as I know, the factor does not alter with the strength of solution. A combination developer containing pyro does not conform to the rule given above, and its factor can only be ascertained by actual trial. The use of bromide, or its omission, alters the factor greatly with pyro, and, probably, with a short factor developer such as hydroquinone. With high factor developers such as metol, I cannot find that it has much effect. Variations in the amount of alkali in the developer do not alter the factor.

LANTERN SLIDE DIAGRAMS

A Chicago correspondent wants to produce some lantern slides of diagrams and asks as to the best method of going about it. To make transparent lines on a black ground, coat the glass with a varnish made by adding one part of lampblack and four parts of bitumen to sixteen parts of benzol; grind them all well together. The lines can then be drawn directly on the slide with a fine point and without fear of chipped or ragged edges showing. If it is desired to write or draw directly upon the glass, using India ink, the glass is first coated with plain collodion, plunged into water as soon as the collodion has set, and finally soaked in a hot, one in thirty solution of gelatine. If the plates are set up to drain while still hot from the gelatine solution, the collodion film will retain just enough of the gelatine to give a fine surface for writing upon with India ink and a fine cut quill pen. A steel pen is not quite so good, but will answer.

REPAIRING ENAMELED TRAYS

When the enamel chips or wears off, exposing the iron, it is not a difficult matter to give the place a protective coating of sealing wax. A little of the melted wax is dropped on the place, and just before it sets it can be smoothed into position with the fingers. Even where the rust has been allowed to eat its way right through the metal, the sealing wax will prove efficient by not only filling up the hole, but in pro-

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tecting the exposed metal surrounding it. With solder it is necessary to do considerable scraping of the iron to insure its sticking, and much more skill is required in making a satisfactory job.

THE SUN'S BRILLIANCY

The intrinsic brilliancy of the sun, deduced by M. C. Nordmann from temperature measurements made by a heterochromatic stellar pyrometer, shows close agreement with the estimate of Müller, arrived at by entirely different methods.

After allowing for the light absorbed in transmission through the atmosphere, Nordmann finds the intrinsic brightness of the sun to be in the neighborhood of 319,000 candle power per square centimeter, which is about 2,072,000 candle power per square inch. Müller's estimate was 301,500 candle power per square centimeter.

LABELING BOTTLES

It is needless to say that I visit a great many dark rooms in the course of a year, and one thing in particular always interests me, and that is the labels used on the bottles. This is most particularly the case, as I am constantly receiving inquiries as to the best method of affixing them. It may interest some of my readers if I describe a few of the plans I find in use. First of all comes the man who uses no labels of any kind, depending upon his memory to identify each bottle and its contents. This answers very well where only a few solutions are in use; in fact, one of the most careful workers I know follows that plan with his most commonly used solutions. He employs only one developer, as a rule, and that he knows is distributed with the A solution in an amber bottle and the B solution in one of ordinary green or bottle glass. The bromide bottle is so well known as to require no label. The hypo-alum for toning is a large bottle whose milky contents, aside from its familiarity, needs no other identification. His intensifier is in a three-sided poison bottle and the two or three other bottles used with any frequency are easily located by their peculiar shapes. When a new solution of any kind is made up for experimental or only occasional use, it is given a label, of course; but my friend reasons it all out, that if any given solution is of such value as to be worthy of a permanent place on his shelves, it will be used often enough to be easily identified if in a bottle a little different from the others. His plan works quite well in his case; but it would hardly be applicable in that of the man who is constantly changing about and experimenting. Another careful worker finds that, while he does not experience any crying need for labels to indicate the contents of the bottles, he does find it of great importance to be able to refer to the label for information as to the exact composition of the contents and the length of time it has been made up. Here and there we find a worker, generally a beginner, who values the appearance of his shelves more than the convenience that comes with the odd sized bottle plan, and he keeps all his solutions and chemicals in bottles of a uniform size and shape, generally nicely labeled. And it seems almost impossible to make labels stick to bottles kept in the dark room. Both dampness and dryness are conducive to their dropping off; and to overcome this, many workers label directly on the bottle by using a black paint and a finely pointed brush. Another plan is to have a patch of the desired size given a ground glass surface by sand-blasting or otherwise, and writing the label thereon in pencil. It is hard to find a paint that will not chip off when used as first described, and the pencil writing is easily soiled or defaced. One worker gets around many of the difficulties by writing his labels, the formula used, and the date of compounding, on a strong tag which is tied to the neck of the bottle. This last plan has the slight disadvantage that the tag is sometimes in the way when pouring from the bottle; but one soon gets in the habit of unconsciously grasping the tag along with the bottle, and the difficulty disappears. Coming down to a really serviceable label, before closing this talk, the best I can recommend is as follows: Use ordinary gummed labels, the kind you can buy with a neat red border and dotted lines for the formula, if you wish, at any stationery store. Moisten them with water in which a little sugar has been dissolved, about three lumps in two ounces of water, and then dry. Brush over with a warm solution of gelatine, about ten grains to the ounce, and when this last is dry, apply a coat of light oak varnish.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

ALWAYS USE YOUR NUMBER

The Secretary is constantly receiving requests from members for the name and address of other members with an explanation something like this: "The member lives in such-and-such a State, but I can't make out the name of the town." A letter has just come to hand from No. 2381, Royal M. La Flower, Port Angeles, Washington, in which he says: "I have been receiving prints and cards from members who sign their names and write their addresses in such poor writing that one can but guess as to what they are. I would suggest that all members put their I. P. A. number after their names, thus making it possible to look up their names and addresses in the printed lists as they appear in back numbers of our magazine. I have a number of unfulfilled exchanges that I cannot complete because of such poor writing. Any members failing to have received return prints or cards from me will please take notice of the above." I think Mr. La Flower's suggestion is a good one. In the early days of the Association, when I had the time to do some exchanging myself, I always used my number after my name, and the practice was almost universal with the members at that time. Even if your writing is good, giving your number enables the recipient of your prints to look up your exchange notice more easily, should he desire to learn concerning your wants and what you have for exchange.

A PENNSYLVANIA ALBUM

L. A. Sneary, 2822 Espy Avenue, Pittsburg, has accepted the post of Pennsylvania State Album Director, and he can be depended upon to give it the best of attention. But it will not be possible for him to do very much except with the co-operation of his fellow members in the State. We trust that they will all send him a few prints so that the first album may be gotten out at once, and gotten out in such a shape that it will be a credit to the large number of members that the State contains. As soon as the first album has made its rounds it will be exchanged for one from some other State, which will, in turn, be circulated. State albums afford members an excellent opportunity of picking out good exchanges, of comparing their own work with that of others, and they require only that the member send in a few prints to his State Album Director from time to time. Pennsylvania members will please send prints to Mr. Sneary at once.

THE NEW YORK ALBUMS

The last few months have been without a routed album in New York State. This I am sorry to state. However, I feel assured that the future months will be more successful, judging from the letters some of the members have written me.

Here is a plan I have outlined for the coming months: To every member in New York who sends me at least three good prints to be inserted in the State circulating albums, and agrees to have the albums routed him for the months of August, September and October, I will send an unmounted photograph of a local scene, something of a landscape or water view near the beautiful St. Lawrence River.

In July I will route a series of photographs from Africa, Austria, Japan, Belgium, etc., together with the quaint letters and stamped envelopes received therewith. These I obtained through exchanges in 1906, and are my personal property. The set will be routed to every New York member who will advise me by postal that it is desired. The December, 1911, album will be a members' portrait album, and I earnestly request every member to send me his or her photograph, preferably a self portrait or an amateur one, as this is usually more satisfactory than the professional kind. Send it right now, before you forget.

LOUIS R. MURRAY,
N. Y. Album Director.

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OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4954 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 200 South Marion St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

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German — George N. Baumiller, Nutwood, Ohio.

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Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

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Tennessee—George Parke, 292 Madison Ave., Memphis.

Texas—Frank Reeves, Roby.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

2893—C. E. Bocock, Box 82, Albion, Idaho.
4¼x6½, 3¼x5½, and 4x5, developing paper, of scenery, mountains, waterfalls, etc., Yellowstone Park views; for scenery, industrial views, and foreign views. Good work sent and accepted. Class 1.

2894—John F. Fensel, R. F. D. No. 9, Montpelier, Ind.
Post cards, developing paper, of landscape and nature studies (wild animals); for landscapes. Post cards only. Class 1.

2895—J. W. Ryan, care Pembroke Ptg. Co., Superior Junction, via Fort Williams, Ont., Canada.
3½x12 or mounted 5½x14, developing paper, of landscapes, bush life in a railroad camp in Canada; for anything of interest. Class 1.

2896—H. F. Albert, Box 147, Laramie, Wyo.
Class 2.

2897—D. W. La Belle, 525 8th St., Beloit, Wis.
Class 2.

2898—H. H. Donley Mayburg, Pa.
Class 3.

2899—Alfred Carlson, 1208 Kay St., Sacramento, Cal.
Class 2.

2900—Mrs. M. B. Holmes, 2124 Grand Ave., Connersville, Ind.
Post cards of various subjects; for post cards of scenery and flowers. Good work only. Class 1.

2901—Leslie O. Lewis, R. F. D. No. 8, Dowagiac, Mich.
3¼x5½, 5x7 and post cards, developing paper, of landscapes, stock, general views, etc.; for landscapes, marines, clouds, etc. Unmounted prints and post cards. Class 1.

2902—E. H. Bauman, Box 322, Boyertown, Pa.
3¼x5½, developing paper and post cards, of general views; for the same. Prints and post cards in envelope only. Class 1.

2903—S. J. Hammill, Box 253, Lonaconing, Md.
Class 2.

2904—E. T. Moe, Lock Box 65, Groton, N. Y.
4x5, developing paper, of landscapes and views of general interest; for the same. Class 1.

2905—Mrs. Clinton H. Miller, Clark, S. Dak.
Post cards, developing paper, of game, cloudscapes and farm views on prairie; for mountains, lakes and rivers. Class 1.

2906—Miss Nellie A. Reed, Fair View M. S., Umzumbi Rail, Natal, South Africa.
Class 2.

2907—M. E. Chase, 450 Market St., San Francisco, Cal.
Class 2.

2908—John D. Morrill, State Fish Hatchery, Panguitch, Utah.
5x7, post cards and stereos, developing paper, of mountain scenery, lakes, landscapes, winter scenes, etc.; for anything interesting. Class 1.

2909—Rudolph Stapper, R. F. D. No. 2, Box 94, Marion, Texas.
Class 3.

2910—E. M. Shaw, Colon, Mich.
Class 2.

2911—Corliss Fairchild, Roundup, Mont.
Post cards, developing paper, of mountain scenery, landscapes and street scenes; for anything of general interest. Class 1.

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2912—Chas. Rasmussen, Bayard, Iowa.
3¼x5½, post cards only, developing paper, of scenes, views, groups, from country and town, and pictures from an ocean trip; for anything of interest, would prefer mountain scenes, cowboy or cowgirl pictures. Class 1.

2913—K. J. Purohit, 111 Girgaon Back Road, Girgaon, Bombay, India.
Class 3.

2914—Wesley Fales, Hamilton, Mont.
3¼x5½ and 4x5, developing paper, of mountain scenery, camp scenes, etc.; for anything interesting, particularly marine views and shipping. Class 1.

2915—Tom C. Bonney, Lock Box 258, Faulkton, S. D.
Class 2.

2916—E. J. Wightman, 838 W. Spruce St., Missoula, Mont.
4x5, 3½x5½, developing paper, of general views; for the same. Class 1.

2917—J. A. Volzer, 1507 So. Market St., Canton, Ohio.
6½x8½, 4x5, 5x7 and post cards, developing paper, of landscapes, historical subjects and buildings. Post cards only. Class 1.

2918—J. O. Stancliff, 1121 Laguna St., San Francisco, Cal.
4x5, developing paper, of Panama scenes and Connecticut coast; for foreign scenes, French, English or Swiss preferred; also U. S. Send only good work. Class 1.

2919—J. P. Blanchard, Lovelock, Nev.
Class 2.

2920—Cliff M. Bleyer, 3708 Grand Blvd., Chicago, Ill.
Class 2.

2921—J. E. Olive, Santa Cruz, Cal.
Class 3.

2922—E. T. Seymour, Box 107, Danville, Ark.
6½x8½, developing paper, of landscapes, animals and children; for anything of interest. Class 1.

2923—W. S. McCollester, Box 8, Goleta, Cal.
Class 3.

2924—Harry R. Treat, 3931 Second Ave., So., Minneapolis, Minn.
8x10, 5x7, 4x5, post cards. Class 1.

2925—G. S. Rhodes, care Forrest Service, Flagstaff, Ariz.
Class 2.

2926—Everett Ihrie, 716 Mott St., Kendallville, Ind.
4x5, 3¼x4¼, post cards, and 2¼x3¼, developing paper, of nature and child studies, also cloud pictures; for scenery, child studies, landscapes and anything of general interest. Class 1.

2927—John Lokken, Abercrombie, N. D.
5x7 and 3¼x4¼, printing-out paper, of views from Norway, and miscellaneous subjects; for anything of interest. Post cards preferred. All cards received will be answered promptly. Class 1.

2928—Harold R. Robertson, 136 Buffum St., Buffalo, N. Y. Class 3.

2929—Clayton Williams, Reed, Ky.
6½x8½ and smaller, printing-out and developing papers, of views, portraits and post cards; for views and post cards. Class 1.

RENEWALS.

1874—T. B. Haynes, R. F. D. No. 1, Creston, Mont.
Published in the May issue as No. 2879.
3¼x5½ and post cards, various papers, of general landscape views, and natural studies; for any work of fair quality, historical views given a little preference. Class 1.

1896X—Roy J. Sawyer, 1564 Greenup St., Covington, Ky.
Post cards only of flower studies, landscape, park and Niagara Falls subjects; for post cards only of interesting subjects and foreign views. Only cards sent under cover will be answered, and the right to reject undesirable work is reserved and extended. In Class 1 for good work only.

2072—Wm. H. Seward, Windsor, N. Y.
4x5, developing paper and post cards, of landscapes and water scenes; for anything of interest. Post cards only. Class 1.

2342—Chas. H. Spaugh, Laidlaw, Ore.
Class 2.

2373—Mrs. Geo. Nichols, Dinuba, Cal.
Mrs. Nichols lost all her films and records by fire last winter. She is now in position to exchange and asks all those to whom she owes to write to her.

2445—James E. Mead, care Meade Cycle Co., 35 Wapping, Liverpool, England.
5x4 and post cards, landscapes and views of the interesting places in Europe; for views of local interest, curiosities, etc. Class 1.

2474—E. Shanstrom, Box 916, Shanghai, China.
3¼x5½, developing paper, of views of people and places in China and Japan; for views of places of interest, mountains, scenery, etc. Prints and post cards. Class 1.

2488—Merritt Davis, Box 136, Salem, Ore.
3¼x5½, developing paper, of flowers, animals, and scenes of all kinds on paper or post cards; for the same in post cards only. Class 1.

2498—B. B. Sprout, 516 West Fourth St., Williamsport, Pa.
3¼x5½, 4¼x6½ and 5x7, miscellaneous subjects; for the same. Class 1.

2500—B. P. Angle, Battle Creek, Nebr.
4x5, 5x7 and post cards, developing paper, of miscellaneous outdoor work; for the same. Class 1.

2513X—John Beck, 224 W. Park Ave., Aurora, Ill.
5x7 and 3¼x5½ on post cards, from general views; for anything of interest. Three or four cards exchanged at a time if desired. All exchanges handled promptly. Post cards only. Class 1.

2525—Wm. Mathieson, Jr., Box 8, Cromwell, Conn.
4x5 and 5x7, developing paper, of streets, landscapes and groups, all amateur work; for the same. Class 1.

CHANGES OF ADDRESS.

379X—Ed. L. Graybill, 1331 Scott Ave., Canton, Ohio.
(Was 1115 N. McKinley Ave.)

744X—Frank L. Church, 406 Mohawk St., Herkimer, N. Y.
(Was Lowville, N. Y.)

1036—F. J. Layton, Coquille, Ore.
(Was Montfort, Wis.)

1924—Ernest J. Fox, R. F. D. No. 1, Mt. Ephraim, N. J.
(Was West Collingswood, N. J.)

2100—Mrs. R. E. Pennington, Monterey Aprt. 54, North Yakima, Wash.
(Was Prosser, Wash.)

2140X—Cleo L. Bowerize, R. F. D. No. 1, Nankin, Ohio.
(Was Ashland, Ohio.)

2363—Royden G. Girling, R. F. D., Hotchkiss, Colo.
(Was Trinidad, Colo.)

2404—A. E. Fyall, 40 Hastings St. W., Vancouver, B. C., Canada.
(Was Lower Nicola, Canada.)

2441—George T. Stevens, Dante, Va.
(Was Kayford, W. Va.)

2466X—W. F. Haver, Madera, Cal.
(Was North Fork, Cal.)

2499—Andrew Schoeppler, Station 23, 1647 Fisher Ave., Detroit, Mich.
(Was 407 Dubois St.)

2581—Rev. Oscar L. Joseph, Spring Valley, N. Y.
(Was Suffern, N. Y.)

2591—Tom Mandry, Lock Box 1207, Oklahoma City, Okla.
(Was San Francisco, Cal.)

2604—Clifford Hampton, Western, Nebr.
(Was Castlewood, S. D.)

2612—E. R. Hall, R. F. D., Tiashoke, N. Y.
(Was Culebra, Panama.)

2806—Alonzo Garber, 905 E. 9th St., Sedalia, Mo.
(Was 1804 S. Harrison Ave.)

WITHDRAWAL.

2778—E. W. Arlin, Rockport, Wash.
Must withdraw for about a year on account of traveling.

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CLUB NEWS AND NOTES

Club Secretaries and others will oblige by sending us reports for this Department.

JAMESTOWN CAMERA CLUB

The Jamestown Camera Club has just closed a successful and inspiring exhibition, its fourth annual effort in that direction. One hundred and thirty-eight prints were hung; the Chicago Photo Fellows, Pittsburgh Photo-Pictorialists, and the Buffalo Camera Club being well represented. The club itself was represented by thirty-eight very fine pictures, and Paul L. Anderson, of East Orange, New Jersey, showed some fine platinums and gum-platinums. The exhibition was held from May eighth to fourteenth, inclusive, Jamestown, New York.

M. A. A. A. CAMERA CLUB

The Montreal Amateur Athletic Association Camera Club held its Fifth Annual Exhibition in the Life Members' room of the Association from April 17th to the 22d. There were close upon two hundred pictures hung, including entries from various parts of Canada, the United States and England, many of which displayed artistic qualities of a high standard. The exhibits were classified and awards made as follows: Open Class A, for figure studies, first prize, W. S. Fife, Toronto, "Simple Life in Toronto"; second prize, H. Y. Sümmons, London, England, "Salome—The Head." Open Class B, for all other subjects, first prize, A. M. Bryson, the M. A. A. A. Camera Club, "Solitude"; second prize, B. F. Langland, Milwaukee, "Evening Landscape." Club Class, first prize, W. R. Allen, "The Willows"; second prize, A. M. Bryson, "November." Green prize (club), Charles Adkin, "On Paul's Gray Common."

The Club held its annual meeting on April 28th in the clubhouse, Peel Street, when the following were elected to office: President, W. R. Allen; Vice-President, G. A. Melville; Recording Secretary-Treasurer, Charles Adkin; Corresponding Secretary, P. S. Robinson; Executive Committee, M. Barford, Arthur McNally and Arthur M. Russell.

All communications should be addressed to the Corresponding Secretary, Peel Street, Montreal, Canada.

CALIFORNIA CAMERA CLUB

Various improvements are under way at the clubrooms, including alterations in the studio, lantern slide and bromide enlarging rooms. At the suggestion of President Kemp, a club gallery of photographic pictures, for members' work only, has been instituted. It calls for a new exhibit of prints each month, the selected picture, one each month, being framed and hung for the balance of the year. A committee of recognized artists shall then select from these the best picture, the club awarding a prize of twenty-five dollars to the successful member and retaining the picture for its permanent gallery.

Dr. H. D'Arcy Power has been made an honorary member of the club, in recognition of his many past favors and of his eminent standing in the photographic world.

Many of the pictures, made on the recent outing to San Geronimo, were exhibited on the walls of the reception room, and H. F. O'Connor's "Horses" was voted the best. A picture by H. F. Rabe was next, and one by H. S. Hoyt, third, in popular favor. Fifty-seven members and friends attended this outing.

For the benefit of the Children's Hospital, the club repeated President Kemp's very popular illustrated lecture on "Panama and the Canal" at Scottish Rite Auditorium on May 19th. A tidy sum was realized for this worthy charity.

A demonstration by Harry Gibbs of two modern developers proved interesting and instructive to a large attendance on May 24th. The regular monthly lecture at Christian Science Hall on Friday evening, May 25th, by Herbert W. Gleason, who showed many finely colored slides and moving panoramas depicting "Our National Parks" was greatly enjoyed.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

REPORTED BY WILLIAM WOLFF

Albert Salb, of Los Angeles, has taken charge of the Valentine Studio at Redding. Mrs. Salb is giving the reception room her attention.

T. M. Swem, of Ashland, Oregon, will close his studio there on June 1st, moving North.

A. T. Lewis, of Grants Pass, Oregon, has opened a second studio in that town. He also holds a lease on the other remaining skylight.

Reynold's studio, of Eugene, Oregon, has been purchased by Melvin Clark, whose two brothers have a studio in Roseburg, same State.

Salem, Oregon, now boasts of six studios, the last one being opened recently by Richard Loewenfeld, whose work is excellent. All the studios there are doing a good business.

Marcell, formerly of Bakersfield, California, now has a studio in one of the big office buildings on Washington Street, Portland.

Louis Grove, of San Diego, was found dead April 22d in his gallery with a quantity of cyanide at his side. He had bought the chemical about a week before, and had evidently drunk a solution of the poison.

W. H. Arrowsmith, formerly of Oakland, has purchased the Rasmussen Studio on Market Street, San Francisco. The building in which his Oakland studio was located is to be torn down.

P. Franck, an expert portrait photographer from Auckland, is equipping a handsome studio at 207 Powell Street, this city. It will be known as the Talma Studio.

George G. Frazer, prominent in railroad and fraternal circles in this city, and H. G. Vaughn, President of the Board of Health, and formerly of Vaughn & Keith, have purchased the Tabor-Stanford Studio on Geary Street, and incorporated under the name of Vaughn & Keith.

J. C. Gasberg has opened a new studio, the Studio Royal, in the McNear-Cochrane Building, in San Rafael. Mr. Gasberg recently came to this State from Ogden, Utah, where he conducted a studio for twelve years.

Mrs. Wilder has sold her studio in Prosser, Washington, to Mrs. Dessa Martin, a first class photographer, late of Ellensburg, same State.

A COPYRIGHT DECISION

A verdict has just been reached in a copyright case, Drake Brothers, of Silverton, Oregon, against the Journal Publishing Company, of Portland, Oregon. September eighth, 1907, the defendants published two photographs of Silver Creek Falls, copyrighted in 1903 by Drake Brothers; publishing them against the will of the photographers. It was decided to sue for damages, and on March fifth they purchased from the publishing company four hundred copies of the paper at five cents each, and action was brought in the Federal Court for eight hundred dollars damages, the statutes providing for a penalty of one dollar each for copies of such infringing pictures found in possession and offered for sale. The case dragged along until May 17th, just passed, when it came to final trial. After all evidence was in, Judge Bran explained that there seemed to be no flaw in the evidence, the law was quite plain, and instructed the jury to hand in a verdict in favor of the plaintiff, for an eight hundred-dollar judgment against the Journal Publishing Company. Half of this amount, according to the statutes, goes to the government.

A NEW LOCAL CONCERN

The Wilton Company, with T. H. Wilton, the well-known marine photographer, as manager, has opened an office in the Kamm Building, 717 Market Street, this city. The new firm will occupy itself principally with the prompt filling of retail orders for Cyko papers, making a specialty of good service and prompt deliveries, supplying a demand

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that Mr. Wilton believes has too long existed unsatisfied. The new concern has our best wishes for its success.

PHOTOGRAPHY AT THE SPOKANE INTERSTATE FAIR

Photography will be given higher prizes this year than any other class of exhibits in the Fine Arts Division of the Interstate Fair to be held at Spokane, Washington, October second to eighth, inclusive. It is the desire of those interested to start a camera club in that city and they are working to that end in co-operating with the directors of the coming Fair to secure a fine exhibition of photographs from all over the country. We would advise all our readers to write H. Romeyn, Box 2184, Spokane, for full particulars, doing it at once so that pictures can be prepared and sent. There are no entry charges and all pictures will be returned if postage is sent for that purpose. Pictures can be mounted or framed.

PICTURES WANTED

The Bausch & Lomb Optical Company is desirous of securing pictures of game and child studies in the home made with Tessar or Protar lenses. Any one having negatives of interest in this line will do well to communicate with them, addressing Department U., Bausch & Lomb Optical Company, Rochester, New York.

SPECIAL AGRICULTURAL DEMONSTRATION TRAIN

The Special Agricultural and Horticultural Demonstration Train now being operated in California by the Southern Pacific Company and co-operated in by the College of Agriculture of the University of California, is by far the most extensive effort of this kind that has ever been put forth in any part of the country.

The spirit of the great transportation companies of today is to recognize the fact that the success of the producers along its lines means the greater success of these companies. A spirit of co-operation with the producers is manifested, and the Southern Pacific Company, recognizing the fact that better results should be obtained from the farms of the State, and also recognizing the fact that its best interests are bound up in the success of the producers, has joined with the College of Agriculture and Experiment Station of the State, in bringing to the farms and to the workers thereof improved methods of procedure whereby better returns could be obtained.

The first train to be sent out in this co-operative endeavor began its work on November ninth, 1908, covering the northern and central portion of California. The train consisted of two carloads of exhibits illustrating better methods of agricultural and horticultural practice, and also methods of control of insect pests and diseases of trees against which the producer had to contend. A total of six runs was made in the season of 1908-09, a total of 37,270 people visited the train, and a great deal of interest was manifested. During the season of 1909-10, a total of 73,-663 people visited the train. In this connection, it is interesting to note that during the season, twenty-six such trains were run in the United States, a total of 182,745 people visited them. As the California total is included in these figures, it follows that forty per cent of such visitors visited and obtained information and inspiration from the California train. This is a record of which to be proud.

An immense amount of correspondence has also come in regarding the work already done, indicating that the writers of the letters received, were thinking of, studying, and searching for, further information along the lines touched upon in the train.

The bringing of the work of the College of Agriculture so directly to the producers of the State is to be credited to the enlightened action of the transportation company. The expense of maintaining a moving train of this character is far too great for any educational institution to undertake, and the recognition of the value of this work and the very tangible illustration of this recognition by the transportation company is an idea well worthy of consideration by all thoughtful people. The Special Agricultural and Horticultural Demonstration Train, operated under the joint auspices of the University of California and the Southern Pacific Company, is unquestionably the greatest and most far-reaching educational and value-improving factor ever set in motion in this State of California.

CHANGE OF AGENCY

Information has reached us that Messrs. James Frank & Son have been succeeded by Messrs. Kreps & Stelling, Augusta,

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Georgia, as American agents for Rodenstock's famous "Eurynar" lenses.

We are advised that the reason for the change is that the demand for "Eurynar" lenses is growing so rapidly that Frank & Son, who have other business interests, could not give it the attention it demanded.

We can certainly congratulate their successors in having secured this agency, and we predict for them great success. They without doubt have a very high-grade lens at a remarkably low price.

If you are at all interested in the lens proposition you cannot do better than write for information. Just address Kreps & Stelling, Augusta, Georgia, inclosing a two-cent stamp.

SOME REAL LENS BARGAINS

Owing to their central location and the long time during which the house has been favorably known to the photographers of the Middle West, the St. Louis-Hyatt Photo Supply Company always have on hand a well-chosen assortment of second-hand lenses, many of which are very exceptional bargains. These are listed in a "Bargain List" that is issued from time to time. We would advise our readers to send for a copy of the last issue, assuring them that they will receive the best of attention and fair dealing from the firm. The address is 805 Washington Avenue, St. Louis, Missouri.

ILLINOIS COLLEGE OF PHOTOGRAPHY NOTES

LeRoy Kellogg, student of 1905, has just been elected Secretary of the Inter-Mountain Photographers' Association. His exhibit at its recent convention was the one selected to be sent to the National Convention at St. Paul in July.

Alois Meyers of Lead, South Dakota, enrolled with the May class for a course in photography. His son, Frank J. Meyers, took a course at the college in 1908, and has been quite successful.

We received an announcement last month of the marriage of Miss Elizabeth Willits, student of 1909, to Fred L. Shepard, D. D. S., of Remus, Michigan.

Former students visiting us last month were F. A. W. Dean, 1900; Anthony Straw and R. N. Long, 1910, and A. O. Rowe, 1908.

George H. Bryant, 1908, who has been located at Fort Worth, Texas, recently lost his studio by fire; and Jesse Wamsley of Danville, Illinois, student of 1902, experienced a similar misfortune last month.

A PRIZE WINNER

Our congratulations are extended to M. Richard Witt of Philadelphia, the winner of the Bausch & Lomb-Zeiss Tessar Lens and Compound Shutter offered as a prize in the Wanamaker contest of Philadelphia for the best photograph made with a Bausch & Lomb lens. William H. Rau, the genial President of the Professional Photographers' Society of Pennsylvania, acted as judge, and selected the head and shoulder submitted by Mr. Witt as an excellent example of artistic portraiture and easy, graceful posing.

By the way, you should send to the Bausch & Lomb Optical Company for a copy of "Facts and Figures About Lenses," which contains tables of angle of view, stop comparisons, enlarging and reducing tables, studio distances; in fact, all the reference tables needed by the photographer in his daily work. It fits the vest pocket. Address them at Rochester, New York.

DURATOL, A NON-POISONOUS, RAPID DEVELOPER

Since the advertisements on Duratol have appeared in the photographic journals, the attention of a great many photographers has been aroused by the statement that there is at least one coal tar rapid developer which does not stain the fingers of the operator and, above all, does not cause poisonous symptoms peculiar to other rapid developers. Soft and harmonious negatives are produced, "fog" is absolutely eliminated and the results generally are unsurpassed by any other developing agent.

A communication recently received from a Milwaukee studio, strongly supporting the contention of the manufacturers of Duratol, reads as follows:

"I have tried the sample of Duratol and have no hesitancy in pronouncing it the finest developing agent that I have used in my twenty-five years' experience. For energy and economy, definition and brilliancy it has the old developers 'skinned a mile.'

"I will add that it gives me great pleasure to say this of the product, because it deserves it and makes good."

TWO NEW DRY PLATES

During the past month two new dry plates have been marketed by the Defender Dry

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Plate Company—the Defender Orthochromatic and the Defender Non-Halation. Both of these plates are offered to the public only after rigid tests have proved them to be of first quality in every respect. The Orthochromatic plates are extremely sensitive to yellow and green, and will give a nearer correct rendering of all colored objects than will the usual plates. The Non-Halation plates possess the same properties as the Orthochromatic, and, in addition, completely prevents halation, thus giving even better rendering than the Orthochromatic plates. The Non-Halation plates are double-coated, first with a slow emulsion of great opacity, second, with a fast Orthochromatic emulsion, and in developing the slow emulsion will add brilliancy to the negative produced by the fast emulsion.

The two new Defender plates indicate that this company intends eventually to place a complete line of dry plates on the market.

THE DISTRIBUTION OF CENTRAL DRY PLATES

A recent letter from the Central Dry Plate Company says: "We wish to announce our establishment of branch offices at 64-66 Wabash Avenue, Chicago, and 522 Sixth Avenue, New York; also our employing of George T. Bassett, who will be in charge of the Convention work and act as our general representative throughout the United States. Our Mr. Morris has just returned from Minneapolis, where arrangements have been made with the Northern Photo Supply Company of that city to represent us exclusively in Minnesota and North and South Dakota. The firm favored us with a very large stock order, and will carry a complete line of Comet plates in the mentioned territory.

"We have also made arrangements with J. L. Lewis, 522 Sixth Avenue, New York, to represent us exclusively in New York, New Jersey and Connecticut, and he will be known as our Eastern representative. F. M. Whipple, for years general agent for the Standard Dry Plate Company, will be in charge of our Chicago office. Our New York representative has not, as yet, been decided upon, but will be shortly, however.

"The Central Dry Plates are now being stocked by a large number of progressive stock houses throughout the country, and we are daily receiving reorders and inquiries from all parts of the United States.

AN INTENSIFIER THAT INTENSIFIES

Intensification, the right kind of intensification, is a power in the hands of the photographer, second only to development. Reduction is somewhat risky, as there is danger of carrying the matter too far, and detail once lost cannot be restored. In developing, we can assure ourselves that any slight over-density can be removed, and for that reason feel confident that we must only take care to see that our negatives are on the dense side where we are in doubt; but this plan is not advisable. By forcing development, fog may be produced and the quality of the final result is problematical. With a good, reliable intensifier at our command, all this is changed. One has simply to assure himself that he is securing all the detail required, and then if the desired density is not secured, the fault is easily remedied. Even the most careful workers will, working with a variety of subjects under varying conditions, produce negatives that are a trifle too thin. The worker may have a number of negatives that print very well on a contrasty developing paper, but which he desires to print on platinum or some paper that requires more density. Simplex intensifier is a solution that we can confidently recommend. We have tried it ourselves and are more than pleased with the result. It is not a dangerous poison like those containing corrosive sublimate, which are so often published. It is not claimed for it that it will either intensify or reduce. It is not a dirty solution that simply intensifies by staining the film and making the printing much slower. It is a clean solution that is to be diluted with water before use, giving uniform results, no stain or discoloration other than a slight warmth that is confined to the image itself. It is not corrosive; keeps well and can always be depended upon to do its work. The results are permanent and we believe any of our readers who will secure a bottle and try it on some of their thin negatives, negatives from which they cannot at present secure good prints, will thank us for calling their attention to so excellent an article. If your dealer does not carry it, write direct to Simplex Intensifier Company, Kansas City, Missouri.

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TO THE NATIONAL IN AN AUTOMOBILE

President L. H. Bissell of the Illinois College of Photography and the Bissell College of Photo-Engraving at Effingham, Illinois, has just added a fine, high power touring car to his garage. This will be used for road work and to assist in meeting students at the trains; but Mr. and Mrs. Bissell will use it to make the trip to St. Paul at the time of the National Convention. The car has a speed of over 400 H. & D., the tires are double coated, the engine works at f-4, the magneto is non-abrasion, the carburetter has an iris diaphragm, the spark plugs are long focus, the wind shield is non-curling, and all gasoline will be tested with litmus paper before being used. Mr. Bissell and his charming wife are welcome visitors at the Conventions, and we wish them all pleasure on their tour to the National in July.

THE X L SHUTTER

A shutter has just been perfected by the X L Manufacturing Co. of Rochester, New York, which, we believe, will prove of inestimable value to every camera user, whether amateur or professional, who is at all interested in being absolutely certain as to his timing. The great difficulty with the present style of shutter is that the condition of the valve is determined by the temperature, and consequently when set at a certain time, say one-fiftieth of a second, it is absolutely impossible to get that time in cold weather, while in warm weather a quicker exposure than desired may result. The position of the camera also makes a great difference in results with the valve-controlled shutter now in use. For example, when the camera is turned on its side or in any position but upright, the friction of the sides of the valve against each other greatly retards the action of the shutter. This is a matter of self-demonstration, and if our readers have never noticed the difference we advise them to make the experiment.

The X L Universal is built on a principle never before used in shutters. A train of wheels controls the action, not valves. These wheels cannot be affected by heat or cold, nor by dust, as is the case with valve shutters. This gives the Universal these great advantages: Absolute accuracy, you get the speed at which you set the dial; full speed under any weather conditions, which is not possible in the old-fashioned valve shutters, and, steadiness, because the retarding mechanism is directly connected with the motive power.

The Universal has four leaf shutter blades, thus giving even illumination to the plate; is finely made and finished. It is claimed to be the fastest automatic shutter ever produced, having twice the speed of any other. It also has time and bulb exposures. For full information and prices, address, X L Manufacturing Co., Rochester, New York.

WHAT AGFA MEANS

We wish to make clear to you the origin of the now famous "Agfa" trademark. The letters forming this word are, in reality, the first letters of the firm title, Actien-Gesellschaft Fuer Anilin-Fabrikation, a most descriptive name (company for manufacturing aniline). Now we feel closer to you, as we have long suspected the mysterious word "Agfa" has not conveyed its full significance to you.

Rodinal, "Agfa" Intensifier and Eikonogen were our first products offered for your consideration. Your liberal purchases of these products assured us of your good opinion and it is the purpose of this heart-to-heart talk to call your attention to our entire line. The standard applied to our developing agents is acknowledged the best in the world and our large European distribution has satisfied the most critical of chemists.

To further your more intimate knowledge of our developers, we have carefully prepared and put in book form, formulae for all the leading American brands of Plates, Films and Papers. This book we will mail you upon receipt of a label taken from any of the "Agfa" products, together with ten cents. Likewise, we have also prepared a most complete and instructive book on "Flashlight Photography" which we will mail you upon receipt of an "Agfa" Flash-powder or Flash-lamp label, together with ten cents.

BERLIN ANILINE WORKS,
213-215 Water Street,
New York, N. Y.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. Those of positions wanted inserted free. No business advertisements will be accepted.

WANTED Good 5x7 anastigmat lens; must be a bargain; give full particulars. G. S., care "Camera Craft," San Francisco, Cal.

WANTED A set of tanks for developing such as are used in large finishing departments; write, giving full description and lowest cash price. W. E. Brown, 366 Grove Street, Milwaukee, Wis.

WANTED A 6½x8½ or 8x10 lens; think prefer Goerz Dagor, wish a rapid lens. Photograph Manufacturing Co., NW corner Eighth and Main Streets, Louisville, Ky.

FOR SALE Photograph gallery in mining town; good location, electric lights, running water, two cameras; price $300.00. For further particulars address W. A. Johnston, Black Diamond, Wash.

FOR SALE Or exchange, one 5x7 Korona Royal camera fitted with Turner-Reich Series 11 F:6.8 anastigmat lens in Volute shutter; also 10-inch wide angle combination and telephoto attachment, sole leather case, tripod, six plate holders, tank developing outfit, color screen; like new; cost $160.00; will sell for one-half cost or exchange for Eastman 3A Graflex or 4A Speed Kodak; reference, any bank or business house in San Jose. Address, John F. Mecklem, 730 So. Eighth Street, San Jose, Cal.

FOR SALE Ground floor studio in the great eastern Washington wheat country; only studio in town; act quick; owner must go East. Bilger, Garfield, Wash.

FOR SALE Set of Complete Self-Instructing Library of Practical Photography for $15.00; also 3A Special Kodak with compound shutter and Zeiss Tessar lens, case and metal tripod; all practically new. W. W. Zender, 1107 W. Tenth Street, Los Angeles, Cal. Gal ONE—11104—May 22—LEN

A BUSINESS CHANCE for sale. One of the largest and best equipped commercial photographic studios in the Northwest. A golden opportunity for any photographer that is looking for a good paying business. Ill health the reason for selling. Do not apply unless you mean business and have money to spend. The plant covers nearly 7,000 feet of floor space. Skylight, 16x22; sidelight, 12x18. The equipment consists of one 20x24 outfit, two 14x17, two 11x14, two 8x10, one 6½x8½, one Graflex, one Cirkut camera, 16-inch focus, a triple convertible lens 24, 42 and 56-inch focus; one 6½x8½ Bausch & Lomb Tessar, one wide angle lens 8x10, one 12x15 Protar Series 4, one Wollensack wide angle 11x14, two Goerz lenses, one 12-inch, one 19-inch focus, besides equipments too numerous to mention in this ad. Address E. T. Hindman Co., Milwaukee, Wis.

FOR SALE Studio in banner creamery county of State; income yearly from butter alone, $1,500,000; five railroads, two colleges, county seat, beautiful lakes. North light; has hot-water heat, electric light, and gas. Fine business. Population, 8,000. Price, $950.00 cash. Long lease if desired. G. M. Hanson, Albert Lea, Minn.

POSITION WANTED By young man, aged 29, who thoroughly understands the photographic business; used to superintending large staff in publishing house; twelve years' experience. Address, F. Dowling, care Messrs. Harry Sandfort, Glen Cove, Long Island, N. Y.

FOR SALE Photo car, 10x22; first-class condition; unfurnished; $150.00. Inquire, Babcock Studio, 531 East Main St., Stockton, Cal.

FOR SALE Ground-floor studio in city of 7,000; twenty other towns to draw from; hub of the Willamette Valley; town booming. Fine skylight, city water, two telephones. Good business, new outfit. Reason for selling, have asthma and must seek a higher altitude. Address, Ragan's Studio, 120 Second St., Albany, Ore.

FOR SALE Goerz Double Anastigmat lens, Series III, No. 6, fitted with Bausch & Lomb Automatic shutter. List price, complete, $111.00. Lens and shutter in first-class condition. Net cash price, $80.00. Address, Blumauer-Frank Drug Co., Portland, Ore.

FOR SALE A new 3 B Dallmeyer lens with iris diaphragm. List, $164.00. Net cash price, $120.00. Address, Blumauer-Frank Drug Co., Portland, Ore.

FOR SALE Leading studio in Coast city of hundred thousand. Established five years. Long lease. Will sacrifice account other business. Address, R. W., care "Camera Craft," Call Building, San Francisco.

FOR SALE Best paying "one man" photographic business in Western Iowa. Fitted to 8x10. No competition. Address, 225 W & W. Block, Perry, Iowa.

STUDIO WANTED I want to buy a well located studio in California, Oregon or Washington. Give cash price and full information. Address, R. H. F., care "Camera Craft", San Francisco, Cal.

FOR SALE Folding photo car, a success. Two horses can take it anywhere. Price, if taken at once, $150.00. Write for photographs and particulars. W. L. Jones, Silverton, Ore.

FOR SALE OR RENT The leading studio in Mondovi, Wis., a town of 1,500 in the best farming section in the State. Ground-floor studio, fitted complete to 8x10. Good lenses and view outfit, electric light, city water, sewer, etc., and everything to work with. Will rent to reliable party. Have good proposition for right man. Reasonable terms. Was injured in railroad accident, which compels me to discontinue the business. Address, Mrs. H. Sagen, Mondovi, Wis.

FOR SALE On account of continued rheumatism, I am compelled to dispose of my studio and seek a different climate. Have good proposition and will sell at remarkably low price of $275.00. If interested, write, M. O. Johnson, Jordan, Minn.

FOR SALE Best paying studio in South Dakota. County seat of 1,200. Everything in good shape. Receipts last year over $1,700.00. Fitted to 8x10. Will sell at a bargain. Other business. Address A No. 1, care "Camera Craft," San Francisco, Cal.

WANTED Retoucher and operator, at once. Steady position. Address, De Luxe Studio, Sioux City, Iowa.

FOR SALE Two studios located in North Dakota and Minnesota, in best of territory. Good opportunities for branch studios, and fine surrounding territory to draw from. Both studios well located. Will either sell or rent buildings to suit buyer. One studio has heat, light, and water. Rent cheap. For full information, address, E. H. A., care "Camera Craft," Call Bldg., San Francisco, Cal.

WANTED To rent studio in Minnesota or Wisconsin. Give full information to Arthur Anderson, R. F. D. No. 3, Milaca, Minn.

WANTED A young lady of pleasing address, as general assistant. Chance as business partner to right party. Address, Chas. L. Nelson, Browns Valley, Minn.

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Vol. XVIII No. 7 JULY, 1911 Price, 10 Cen

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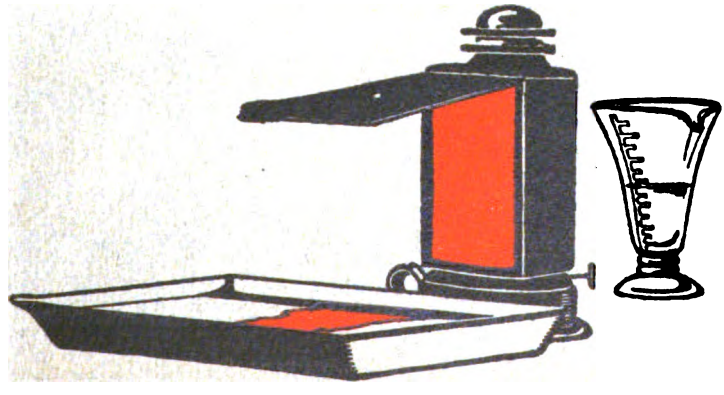

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Ansco Company
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TULIPS
By ROY J SAWYER

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY
FAYETTE J. CLUTE, Editor and Proprietor
CALL BUILDING SAN FRANCISCO CALIFORNIA

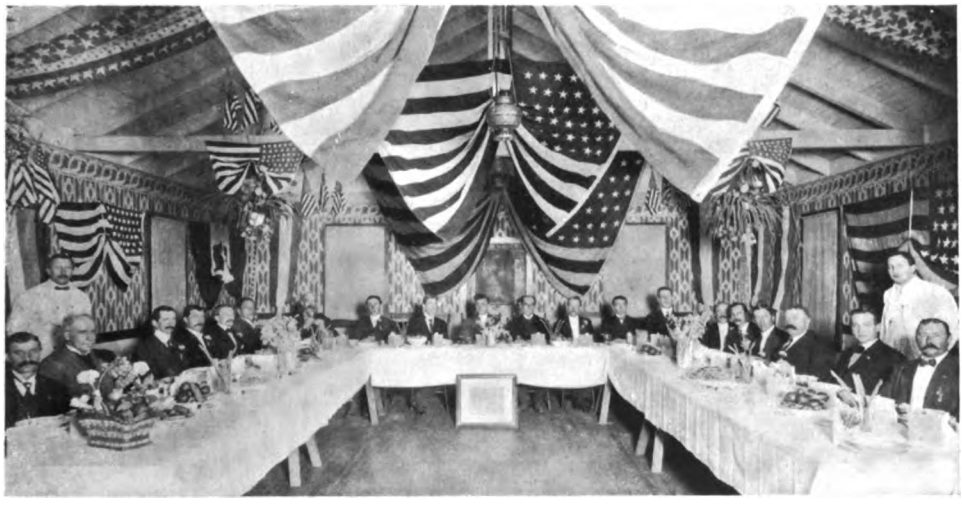
VOL. XVIII JULY, 1911 No. 7

How I Doubled My Business In A Year

By James V. Feather

With Illustrations by the Author

Attractive title, isn't it? Perhaps it has a peculiar interest to you. It may be that you are wondering what is the matter with business, your own business in particular, and what you can do about it. While not desiring to offer anything in the way of advice, I will try to show you how I increased my own business one hundred or more per cent in a year; then, if you think you care to go forth and do likewise, I believe you will come to enjoy your work as much as I do and will realize its illimitable possibilities.



The local Board of Trade had a banquet in the fire house. Picture was made with Zeiss wide-angle lens of five and one-half-inch focus, used on 6½x8½ plate. Victor powder was the illuminant, used in Spredlight flash lamp.

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We (the writer, his wife, and the bull-pup) had been in business in a small town of three thousand inhabitants for nearly two years. We had, as competitors, two fine workmen. I frankly acknowledged them my superiors—at that time. One had been established twenty-four years; the other, twelve. The young man whom I bought out had struggled against their entrenched position for four years, and quit.

We found that business was fairly brisk in summertime, but for eight long months there was very little doing. People said that money was tight, men did not work in winter; and, anyhow, you were expected, in a small town, to hug the stove nearly all winter, and make it up out of the city people in the summer. Decidedly cheerful; particularly as we were not the kind who could save a great deal. We had very little equipment and needed to keep busy for some time in order that we could purchase necessary tools, cameras, etc. We had started in business with a 4x5 camera; and, although we had been making money during the summer, we had spent it as fast as we could get hold of it in fitting up the place. We wanted to have the finest studio, with the best cameras and other paraphernalia, in the neighborhood. So when fall and winter came on, it was pretty hard plugging. The next summer was a repetition of the first; we were quite busy, and again spent all our spare cash on equipment; and, as winter again approached, we were able to look on its coming with a little less dread than on its previous approach. Still, I often thought that it might be wise to close up until spring and go to work in the city. However, I bought a flashlight outfit and kept busy until well into spring, making over three hundred dollars' worth of flashlight pictures between January first and April first. It was something new in the locality; neither of my competitors had ever thought it worth while to bother with; and, being a novelty, everybody wanted them.

The only outfit needed was a "Spredlight" lamp costing sixty cents, and some Victor powder. I selected Victor because that is my middle name. I had previously provided myself with a Zeiss wide-angle lens in a Volute shutter, and found it of inestimable value for the work. I photographed bowling clubs, dinner parties, amateur theatricals, church parties, and the like; working in surrounding towns as well as at people's houses in my own town.

All this set me to thinking that if one could only work along different lines, he could keep busy right along. There was no use trying to compete for the portrait business, my competitors had too much of a lead on me; and, anyway, I didn't see that they were getting rich at it. So why not leave it to them and go in more for commercial and outside work? The field appeared to be practically untouched, except for the house-to-house men who infest the rural districts every spring. It looked to me as if I could build up a good business along those lines.

Our fiscal year starting in April, we decided to try to make every month's business double what it had been the preceding year. We retained the studio feature, improved it, in fact, but decided that henceforth it should be a side line. We were particular to keep the place looking at its best at all times, and whenever I made a particularly attractive picture, we made an

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A birthday party in a small, low-ceilinged room. Picture shows method of seating people so that all their faces show. The table was reduced with ferricyanide of potassium and hypo, so that the detail is shown to better advantage.

Wherever I see a sign that says, "This Property for Sale or Rent," I call on the real estate agent and explain to him how a few pictures will assist the sale of that particular property. The owners, as a rule, will also purchase a few copies.

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enlargement of it, framed it tastefully, and used it for display. The place was always well lighted, all customers were met with a smile, and all made to feel that nothing was too much trouble for us to do for them. The framed enlargements were hung in conspicuous places where every one was bound to see them, and we made it a point to call customers' attention to the fact that we did a great deal of outside work. We installed a system of electric lights for portraiture, and Mrs. Feather made evening appointments, whenever possible, with portrait customers. This gave me the entire day for work outside and on the road, and I improved every hour, as I shall show you.

The local public had long recognized my ability as a view man, but could not see that they needed our pictures; so I made up my mind that I would have to create the demand for the wares I could supply. The real estate men were canvassed for work and shown how they could interest buyers at distant points by sending them attractive pictures of properties on which they were negotiating sales. Houses they had for rent were likewise advisable subjects for the camera. Some of the operators went so far as to have all their properties photographed and booklets printed showing a few general views as well. My name was printed under each picture, and the advertising they gave me was very valuable.

A stock dealer, one who sold cattle on commission, was shown how much better a picture would convey the impression and assist the sale than a long

In making interiors, I do not attempt to change the light conditions at all. I usually give a short time exposure and then follow with a small flash to light up the shadows a little. This gives a picture that looks like a daylight effect and one that closely resembles the room as it appears to the owners. The windows will usually show some halation, but a little work on the fixed but unwashed negative with a solution of ferricyanide of potassium will remove this and allow the detail in the curtains to show up as clearly as the rest of the picture.

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Builders and contractors, as well as tile and cement makers, will purchase pictures of new buildings like this as soon as they see them. They demand critical definition, true perspective, a viewpoint that makes the building look as large as possible, and lots of detail in the highlights as well as in the shadows.

descriptive letter. He has since added the selling of chickens to his line, and my pictures are responsible for many, many sales. A number of chicken fanciers were induced to do business by similar methods, and large numbers of pictures are now used for these purposes in this town.

The local builders were taught what a nice thing it was to have neat albums of views of all the houses and other buildings they had erected, as well as to have a number of framed photographs hanging in their offices. As every building had been erected for some particular individual, one can easily imagine that that particular person would also purchase a few copies, thereby increasing the income from the negatives.

One large road-house was induced to consider the advertising value of a scheme for placing, in all the garages for miles around, a nice framed picture of the house. The manager saw the point at once and I booked a nice order. Nearly all the other hotels in the vicinity have since adopted the plan, we doing all the work. Had the place been one where we were the only ones doing that kind of work, it would have been an easy matter to have charged big prices; but we figured that a steady flow of business was worth more to us than an occasional large fee, and so made our prices that we would be assured the future orders of all the firms we did business with.

I thought long and earnestly before I could make up my mind that a Graflex camera would pay interest on the investment; but when, one day, a very good customer wanted a broadside view of his forty-knot motorboat at speed, and said he had to have it, and that if I could not make it he would

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A political gathering at the county seat, fifty miles distant, looked worth while taking. Result: Sold forty-three pictures at one dollar each, and two at five dollars to the newspapers. Cost twelve dollars auto hire to get there and back. You can figure out the profit yourself. I got the name of every man in the group, from the secretary, and wrote each a letter suggesting that he purchase a copy. Nearly all did so, some taking two or more.

have to send to New York for a man to do the job, you may be sure that I went to New York myself that very day and purchased one. It paid for itself in less than a week, in jobs that I could not have done with any other type of camera. I may say, for the benefit of many of the brotherhood, that I do not own an anastigmat lens, using an ordinary rectilinear. So many photographers delay purchasing a Graflex camera because they do not feel like laying out a large sum of money for a high-class lens. To these I would say, Do not be afraid; your rectilinear will do almost all that you will ever require of it. I have tested mine out with some of the best and most favorably known lenses on the market, and could not see that I was so greatly handicapped except in occasional exceptional cases.

Well, to make this story short, the situation was simply this: we took it for granted that we could keep just as busy as we could use brains to see where our work lay. If the church had a dramatic show, the cast would gladly purchase pictures of themselves—if we went and made the picture. They would never think of coming and asking us to do so. If a body of men were engaged in the erection of a large building, we could always secure a good group that would be profitable. A political convention was productive of another good seller. It soon came to be understood that, wherever there was something doing, our camera was sure to be on the job. The advertising feature, alone, of such a reputation was a very valuable one.

It was not long before the writer was considered a "live wire." At any gathering, from church social to stag dinner, the camera was as sure to be there as the toastmaster. Any and all newspapers wanting anything illustrative of the town, knew where they could get it, and came after it. That started

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another line of thought. A newspaper's influence is far reaching; its prestige descends upon its representatives, and many doors are opened to them that to others are closed. One could think of a number of places to go and make a picture for the papers, places where it would not seem right to push in as an individual, because, above all things, a photographer must conduct himself in a dignified manner in order that he may not be considered a "butter in."

When Si Pettingill had a golden wedding, he was tickled to death at finding the event illustrated in the paper. The right thing, therefore, is to make a group picture of the principals and their guests; the members of the group are delighted, and they gladly purchase copies at fifty cents each. By watching the local papers, one can easily keep posted on these coming events and prepare for them. I never tell the people that I contemplate coming to make a picture of them; but, when I think that the guests have had time to arrive, I go down and explain my mission, stating in a clear, dignified manner what I want to do and to what paper I intend to send the item. When the desired permission is granted (and it has never been refused yet), I set up the camera, make the exposure with the least possible fuss, pack up rapidly, and get out; refusing all invitations to "sit in," on the score that I am too busy. I never ask any one to buy a picture, never even suggest such a thing unless asked point blank, and even then I do not let it appear that that is what I came after. In a few days, if the people do not manifest any interest, I send them a proof, and that does the business.

The local ball tossers are regular subjects every year. Note the manner of handling the light so that squinting is reduced to the minimum. The group is so posed that the light falls from the right and slightly from the rear.

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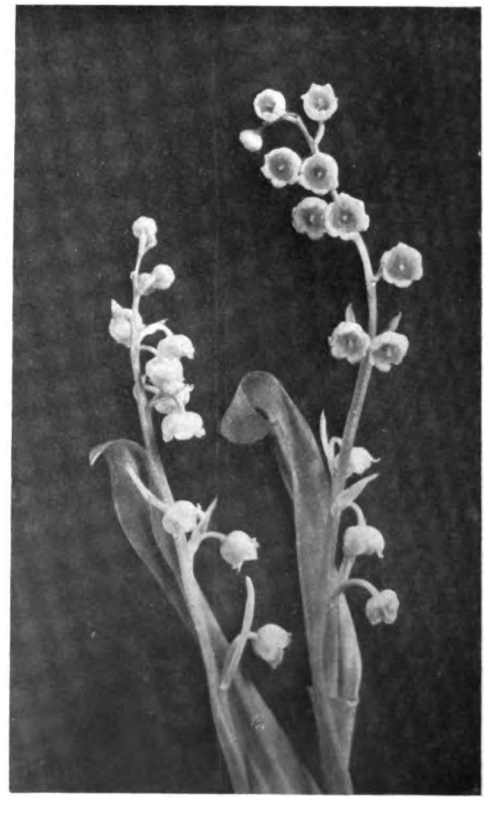
Well, do you think we doubled our business? I guess we did; more than doubled it, and what is more, we gained self-confidence. We found that there was unlimited work to be had if we only went around and found it; we found that the number of people who will purchase pictures cannot be judged by the numbers who will come to a studio. We found, in fact, that everybody will buy pictures if one can only find out just what sort of pictures they are interested in and offer that kind. I filled my street show-case with interesting pictures of all the latest and most interesting events that were going on; made a sort of pictorial bulletin board of it. I filled the hall cases with special and very attractive photographs, plentifully interspersed with written comment calling attention to their uses, commenting on their photographic excellence as well. This hall was kept brilliantly illuminated until nine o'clock at night, and the displays were changed often. I am now trying to increase the business still more; that is, in net receipts. To do this, I shall have to get higher prices, as I have about all the work I can manage to do without assistance; and I am much averse to hiring help. The only way for me to get higher prices will be to specialize, and I am now engaged in so doing, taking cattle as my subject; and, this article being acceptable, I will shortly give my experience in that line.

ROSES
By ROY J. SAWYER



LILY OF THE VALLEY

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The Pleasures of Photography

By Roy J. Sawyer

✷

The three illustrations, the three landscape studies, reproduced herewith, were omitted from Mr. Sawyer's article, "Specialize in Your Work," in our April issue. The original prints are very soft and pleasing in their wealth of fine gradation; and, making up that issue, we were disappointed, at the last minute, in the blocks. Even these now used do not do full justice to the prints.—THE EDITOR.

Let us take our album from its customary place on the center table, and carefully survey the collection of prints contained within its two covers, for the purpose of ascertaining whether our progress in photography has been one of advancement or retrogression. Here on the first page appear five prints of various sizes, ranging from a small bit, 1½x3, of the pet cat,—at least, it resembles our feline friend more than anything else,—to a full 4x5 untrimmed print of a locomotive, which, at the time of exposure, was running too fast for our rapid rectilinear lens and shutter set at one one-hundredth second, as is evinced by a funereal gloom over the entire print, and a noticeable blur on the part of the engine itself. A print of the old railroad bridge, adorned with a telegraph pole at each end, appears most conspicuous, as it was printed under a hopeless mask embellished with fanciful curves of impossible pattern. Pictures of Fido and the baby adorn the lower portion of the page, and it is no great task to tell them apart, as the baby wears a dress, and the dog does not; but the exposures have been of such short duration that it is difficult to judge whether the baby is crying or laughing, the prints being five shades darker than is necessary.

The prints are made on printing-out and gaslight papers, and are in various stages of discoloration, ranging from small spots in some to a complete yellowness in others. There is no attempt at arrangement; however, this is of no consequence, as the character of the prints is such that there could be no improvement. The same conditions prevail throughout the album. It contains portraits taken under every condition of lighting and with all manner of backgrounds, the latter from brick walls to whitewashed fences. Occasionally there appears a print that has had proper lighting and correct exposure, but this is offset by the poor quality of the majority of the prints, ranging as they do from faint outlines to Stygian blackness. We find subjects galore, horses and cows, houses and trees, steamboats and street scenes, all thrown together, without method or meaning, in an utterly hopeless manner.

Of course, dear reader, this is not your album, but it represents one of many that do exist, possibly in the hands of some of your amateur friends. Personally, I know of several; but just where the pleasure comes in, from the possession of a book of this character, is a dark mystery to me.

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Not long ago, a dealer in photographic supplies informed me that a certain young lady had brought him a roll of film to develop, every week for a period extending over two years, and the only subjects she had recorded during all of that time were portraits of herself and several friends, taken either singly or in groups. And she was not the only customer that indulged in this highly elevating (?) and instructive (?) performance, although in a somewhat lesser degree, as her case was exceptional; but, as far as the choice of subjects was concerned, a large number of amateurs of both sexes were of the same inclination. The pursuance of such an inane performance as this is only followed by those that never give the serious side of photography a thought, being content to produce a nondescript collection of prints of a generally worthless nature. But it is some consolation to know that those amateurs who never attempt to acquire anything beyond a mere knowledge of developing and printing, can never hope to rise much beyond the level of a mere beginner.

It has often been said, in regard to any pursuit in life, that our progress is either one of advancement or decline, and especially is this true in regard to photography. We do not remain stationary as regards the quality of our work; we must either go up or down, and the latter is our inevitable course, unless we depart from the commonplace and decide to accomplish results worthy of preservation. The real pleasure of photography consists of having a definite purpose and endeavoring to become proficient in some certain branch of our art. At least that has been my experience, after indulging, for quite a time, in happy-go-lucky, haphazard methods, with results of a like nature.

If the maximum amount of pleasure is desired, the worker should make each of his pictures mean something, should confine his operations to one certain line of photographic endeavor, and aim to become proficient therein. It is only by so doing that he can achieve any marked degree of success. One well-known amateur took up marine photography, almost to the exclusion of everything else; and that he has succeeded is attested by the fact that he has won many prizes in exhibitions, and his work has been reproduced in various magazines as the best pictures of the sea that have ever been taken. Of course, the average worker may never attain such a distinction, but he has a certainty of knowing that if he conscientiously applies his best efforts to one certain branch of photography, and endeavors to become proficient in it, he will soon produce work that will give him a sense of satisfaction and pleasure which he never experienced while engaged in promiscuous "snapping." In my own particular case, I have confined my operations, for the past few years, almost entirely to landscape and flower work. And, while I do not profess to be in the front ranks of the pictorialists, I have the satisfaction of knowing that I possess a few prints of merit, as they have been so termed by competent judges; and these few good prints are a source of justifiable pride to me, something that my earlier ones, made of divers subjects of a more or less worthless nature, never, in the slightest degree, gave me.

The aspiring landscape worker need not sigh for promising material, as this can be had in his own locality, bearing in mind the fact that the simplest subjects make attractive and convincing pictures. Proof of this fact is shown

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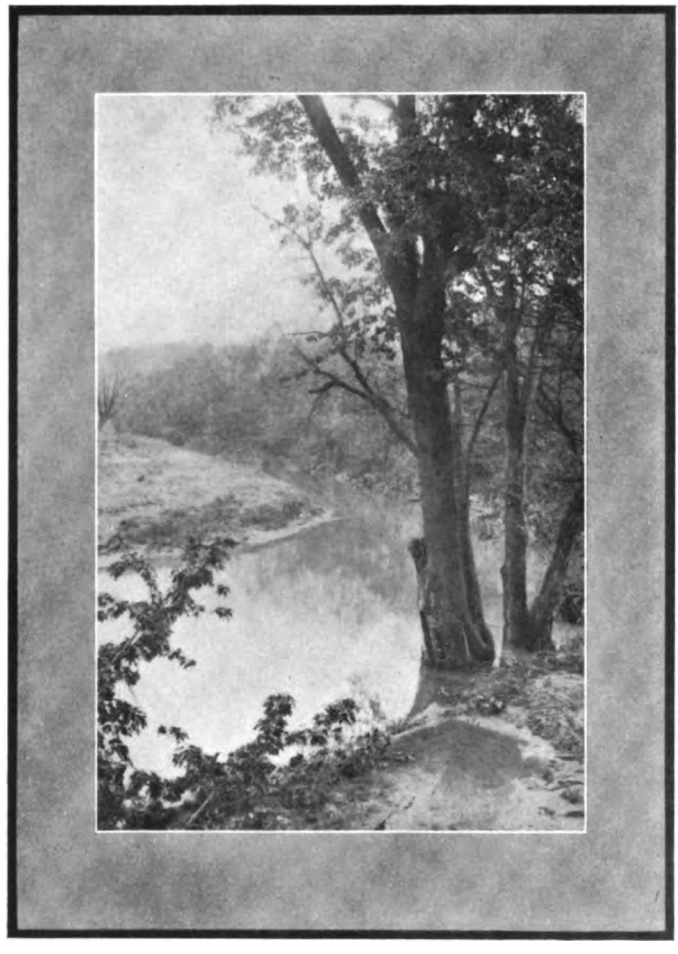
in the three landscape studies reproduced in connection with this article. Owing to lack of space, they were omitted from my article in the April number, where reference was made to them. These studies were all made within a radius of a few hundred feet, and in this same locality I have found many other bits of pictorial nature. I have been awarded honorable mention for these three studies, in different competitions, and this has been an incentive to me to improve still further the quality of my work.



AS EVENING APPROACHES

What a pleasure it is to take a trip with the camera to God's out-of-doors, and study nature in her many moods, and under varied conditions of light and shade! It is an education in itself, aside from the actual pleasure it gives one to depart from the old, hackneyed subjects lacking in interest or merit. A great many amateurs are under the impression that a picture, to be successful, must be taken where there is an abundance of trees, brooks, and other accessories. They are prone to decry the lack of available material in their own locality, but a study of those pictures in the photographic magazines that have been awarded high honors will serve to show that they depend on simplicity of composition for their effectiveness, and that they could have been taken in almost any locality. The landscapes by H. Oliver Bodine, reproduced some months ago in this magazine, are striking examples of this, and it is noteworthy that several of his charming studies were accepted by the Seventh American Salon. I think that my readers will agree with me that the acquisition of such honors is well worth striving for, and, when acquired, will give infinitely more pleasure than being content to merely use the camera for the purpose of photographing whatever strikes the fancy, regardless of its nature.

After one has produced a few good prints, he should not think that his

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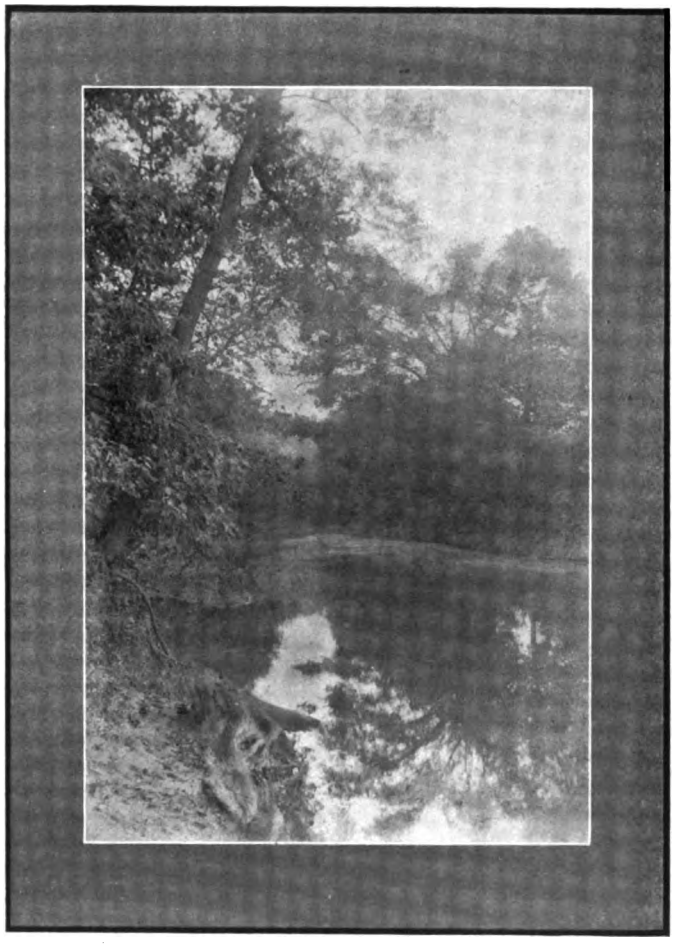
work cannot be improved upon, for, thinking that the work produced is of the highest possible order of excellence, it is safe to assume that the standard set has not been very high. Quality should be the watchword, and not quantity, and one should be satisfied with a small collection of prints, as long as those few have merit.



A QUIET STREAM

Half the pleasure of photography lies in being systematic in everything; by having a place for everything and everything in its place. One should keep all his negatives neatly filed, so that he can select the one desired without looking through numerous boxes, and at the imminent risk of scratching the films. There are negative files of various kinds on the market, sold at reasonable prices, and they provide the only rational method of storing negatives; as, so stored, they can always be had at a moment's notice, the numbered compartments with the titles of each subject close at hand, facilitating this.

When mounting prints in the album, be sure that they are properly washed, and mount one only on a page; using, preferably, double-weight paper. Use suitable cover papers for the sub-mount, something that will harmonize with the tone of the print and the color of the album leaf. The title of each picture should be printed neatly at the bottom of the leaf, using white ink for the purpose. Have the print in harmony with the subject; snow scenes should be printed black and white, autumn scenes look more convincing if printed in sepia, while flower studies and certain subjects of landscape work, where much green predominated in the original scene, appear to advantage when printed on Velvet Green. Only platinum or developing paper should be used. Printing-out paper can hardly be called a suitable paper; it has a cheap appearance, and

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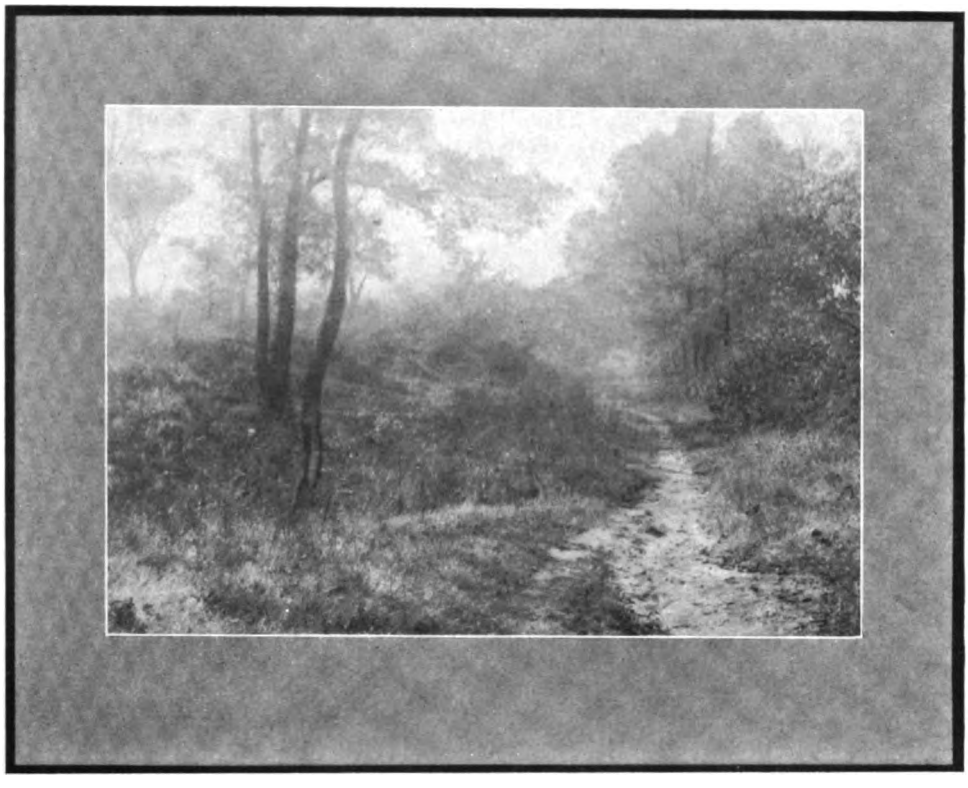

OCTOBER MISTS

has, it seems to me, a very objectionable, glossy surface. If the worker is so inclined, and does not mind the labor involved, carbon paper, with its wide range of color, can be used exclusively, and the beautiful results obtained upon it surpass those by any other process.

As a final word, I would assure the reader that, should he decide to make up an album in the manner described, by mounting only those prints that he has reason to believe are meritorious, he will find it materially increasing in value as each new print is added. And, aside from the pleasure it will give its owner and his friends, it will eventually become one of his most prized possessions.

Robert W. Chambers, in a recent interview, was asked: "What is your definition of art?"

"Oh, d—n art! The men who counted never bothered their heads about art. The old masters were artisans first of all—good workmen, honest workmen. What amazes me about them was their honesty. They were in business—artists, sculptors, goldsmiths, architects—and when they had commissions to execute they merely did their very best and emitted no whine about 'what is art?' The art took care of itself, after an honest job had been executed. Some of these jobs were artistic, some commonplace, varying according to the intelligence and executive ability of the workman. That's all I know about art."

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Don't Guess At Exposures

By J. G. Boyd

"How much exposure shall I give?"

Gentle reader, do you recognize the query? Have you not heard that same old question ever since you first embarked in the most gigantic game of bluff, buncombe and bulldoze, yclept amateur photography, known to mortal man? Of course you have, and of course you will continue to hear it iterated and reiterated, until,—well, until "they" have read this.

Illumination and lighting are separate and distinct propositions. Any place can be "lighted" without being "illuminated." Rows of incandescent lamps surrounding a show window afford a very obtrusive method of lighting, but the show window remains without proper illumination.

"What," ask you, "has that to do with photographic exposures?" Only this: It is a simple method of impressing upon your mind,—if not before known,—that differentiation is essential whenever you wish to make successful views of interior quarters. With a properly illuminated interior, a successful exposure is within reasonable bounds of certainty; per contra, if the place be lighted as distinct from illuminated, then the result is best represented by the algebraic character "X."

Using solar means for our illumination, then, it is essential that we grasp and hold onto the basic facts, or accepted "facts," in the science of illumination. In illuminating engineering it is accepted as a fact that the intensity of the "god of day" varies widely with the juxtaposition of the sun and horizon. This difference is vast, and practically unknown outside of the illuminating fraternity

Now, exposure times being dependent upon the intensity and actinic value of this prime illuminant, a due regard must be had for its worth. In illuminating engineering problems, the values given the intensity of the sun rays are, in part, as follows:

Sun on the horizon, 2,000 candlepower per square inch.

Sun 30 degrees above the horizon, 500,000 candlepower per square inch.

Sun at zenith, 600,000 candlepower per square inch.

The above values cover mid-summer periods. Thus, you observe, the period of exposure must essentially vary with the season and time of day.

Now, light, in the sense we employ the term, is solely and simply a matter of temperature, nature and mass remaining unchanged. The sun being of low candlepower on the horizon, necessarily indicates that the temperature of the beams of light passing through the stratum of air charged with impurities is robbed of much of its heat; hence the resultant illumination afforded is of low actinic value. (We won't quibble over angularity, etc.) As the sun climbs to altitudes higher and higher, it passes, in a sense, from within those "insulating mediums" into realms where the air is purer, and, hence, a degree of illumination carrying higher temperatures results. Those higher temperature rays are stronger in actinic value and call for a decreased period of exposure.

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DON'T GUESS AT EXPOSURES

Many amateurs, and practically all professionals, seem to be ashamed to make use of a device termed an actinometer for measuring that actinic value which produces the chemical changes on the sensitive plate. No good, sound, substantial reason can be successfully advanced for such an attitude.

Many, especially the professional photographers, contend that they can always determine the required exposure by inspecting the apparent intensity of the image depicted on the ground glass. Nonsense, pure and simple! A fairly good guess may sometimes be made; but at that, it is a guess, and naught else. How in the name of common sense can it be aught else than a guess? No standard is present with which comparison can be made. A standard is fundamentally essential if hazard is to be dispensed with. Why do we all insist upon our grocer weighing our groceries? Why do we all count the money the bank teller passes out to us? Why do we consult a thermometer to determine whether or not our pet flowers require protection from the ravages of frost? If any one can determine actinic values from a scrutiny of a ground-glass screen, and submit he is accurate, then he is simply one of nature's wonders, and independent of weights, scales, thermometers, etc.

Actinometers, denuded of technical drapery, are merely one form of photometer similar to those employed in standardizing artificial light sources. Skill in "reading" any form of photometer is essential. That skill is, usually, easily acquired when one does not seek perfection. As we ascend the scale of accuracy in our ability to successfully master top-notch skill, then the more apparent it becomes that the condition of our stomachs from time to time is a powerful factor in accurate determinations; and, therefore, in the absence of all standards and appliances beyond the unaided eye, all "determinations" resolve themselves into guesses pure and simple, professionals and experts to the contrary notwithstanding.

The "three B s," namely, bluff, buncombe and bulldoze, are so prevalent in this photographic game that any one who dares to question ancient procedures or beliefs is certain to "get his" before he finishes. This writer is merely an amateur cameraist, a "dub" at that, and likes to try to smash into smithereens all the little images which obtrude his horizon.

Be the photographer amateur, professional, or expert (whatever that last word means), he is absolutely unable to determine with even reasonable exactitude, the light intensity of any source of illumination, when standards for comparison are absent. No theory about that point; it is cold, concrete fact. All at variance with that declaration is mere—GUESSING!

Actinometers (photometers) are of various types, but basically of the same principle, namely, a "color match." It is my understanding that Mr. Steadman publishes directions for making a simple instrument which is thoroughly reliable, although I do not recall having seen the matter in print. But the type is of lesser moment than the fact of having some form of instrument for that purpose. It is quite reasonable to suppose that, in so far as efficiency alone is concerned, a home-made affair is equally as valuable as a more pretentious device. . Photographic shutters and exposures are at least first cousins, and it behooves every camera user to read the monthly publications closely and absorb wisdom.

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Comic Combination Photographs

By Louis R. Murray

We amateurs sometimes tire of regular negative making and wish to divert our minds by trying our hands at something that promises to prove both a pleasure and a rest; and, by its contrast with accepted methods of work, also provide the desired relaxation.

There is one branch of photographic work that answers the purpose most admirably, giving all the diversity desired, and that is the making of comic combinations. The work has yielded me not only a great amount of pleasure, but unexpected profit as well. One such picture, one depicting a popular local baseball pitcher as of herculean size, gracefully seated on the gable over the entrance to one of our public buildings, with his feet on the street below, was very popular in post-card form. From the negative I sold several hundred prints, netting an amount in excess of my expenses for all my experiments in this line during the past winter. In the case mentioned, the comicality of the picture was increased by the disproportionality between the size of the figure and the building with which it was combined.

In the example shown herewith, it would seem that the grotesque element could be best secured by keeping the right proportions, or somewhat nearly so,

FERRY BOAT ON THE ST. LAWRENCE

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STREET SCENE.—OGDENSBURG, NEW YORK

between the boat and the buildings. The first picture is of a ferry boat on the St. Lawrence River here; a boat of large carrying capacity, but of oil-burning type. The craft was the subject of much comment and criticism, and conse-

THE COMBINATION PHOTOGRAPH COMPLETED

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quently soon gained much popularity, giving me my opportunity. The second picture is a street scene here in my home town; the third being the result of combining the required portions of the first two. This is easily accomplished by making a print from these first two, cutting out the boat and the necessary water foreground, shaving the under side of the edges with a sharp knife until quite thin, pasting it on the print of the street scene, and then photographing the combination. This gives a new negative that prints as in the last picture shown.

If the best possible result is desired, it is advisable to make the two prints by enlarging, as working in a larger size gives better opportunity for touching up the edges of the cut-out portion, and making the new negative from a large combination picture has a tendency to minimize any danger of the joinings showing. But in my experimental work I did not care to go to so much trouble. The picture shown is not the best of the kind that I have produced, but I have sent it to illustrate this little article because it shows what results can be obtained by an average amateur at the first trial, in the most simple manner, and without making special negatives for combining. When one sets about carrying out some particular idea, most grotesque results can be produced by making negatives exactly suited to the idea to be carried out.

The Limitations of Photography

In picturing nature this technique is the only element of personal equation which the camera cannot, or rather will not, do better for the artist than paint photography, and the state of things in the art of representation has come to a strange period in its evolution when the manipulation of the brush and the paint is its greatest reason for existence. Let it not be imagined that all this is but a cocksure bandying of a great genius, for one considers Homer such, even if one does not consider him a great artist—for a great artist would never permit nature to fascinate him beyond his art and cause him to paint the ugliest imaginable arrangements of color on a canvas, simply because they existed in the "motif" before him. The great painter would find in this motif that which would inspire him to paint a picture that must first and foremost be beautiful in form and in color regardless of its physical representation of nature, otherwise it is only a photograph, and photography can never be a great art in the same sense that painting can; it can never create anything, nor design. It is basically dependent on beauty as it exists in nature, and not as the genius of the artist creates it. It is an art entirely apart and for itself. Its successful developments, technically and artistically, of today, are the definite proof of the fallacy of most modern painting; and yet the greatest photograph of a living woman that can ever be made will be much less beautiful than the Mona Lisa, just as nature is less beautiful than art, and as the greatest Velasquez sinks into insignificance beside the gods of granite of ancient Egypt.—EDUARD J. STEICHEN, in "CAMERA WORK."

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An Unusual Snow Storm In Jerusalem

By G. E. Matsson

Some snapshots, together with a short description of the recent almost unprecedented snow storm in Jerusalem, may be of interest to a few of the many readers of CAMERA CRAFT.

Evidently the climate of Palestine is changing, as, for many years, snow has been almost unknown to the natives of Southern Palestine; while now it is becoming quite a usual event. Last year's snowfall, of which two photographs were reproduced in CAMERA CRAFT, was quite an unusual one; but such a snow storm as Jerusalem witnessed this year has not been known for fifty years or more.

This last storm was preceded by a long spell of very dry weather; when, on the evening of February 9th, the barometer began to fall, reaching, by the next morning, a very low degree. A mild west wind blew all the forenoon of the 10th, light clouds floating up and vanishing until about noon, when the wind began blowing very hard, filling the air with a fine dust. Late in the afternoon, heavy clouds rolled up from the west; and, shortly thereafter, the sky became entirely overcast, having a very peculiar, dirty greenish color. It soon began to sprinkle, but instead of clear rain water, actual mud descended for some time, owing to the amount of dust in the air. The wind continued, there were occasional light showers, while lightning and sharp claps of thunder came at inter-

MOUNT OF OLIVES UNDER SNOW

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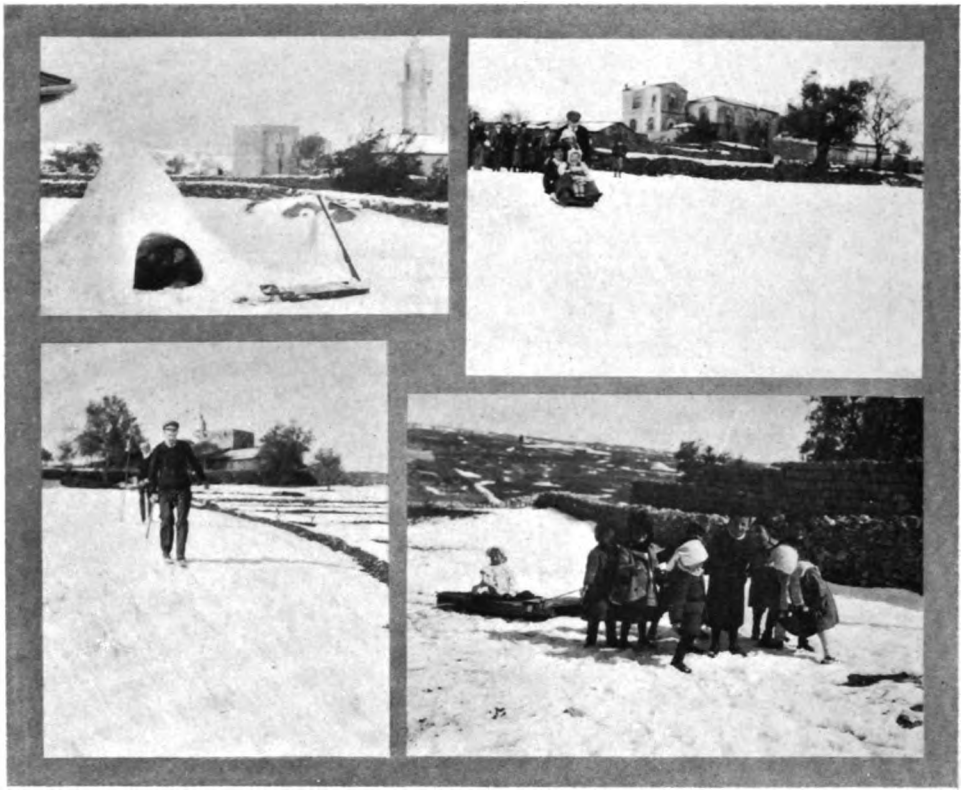

THE CHILDREN TOOK FULL ADVANTAGE OF THE SNOW

vals. The next morning, to our surprise, we awoke to find the ground covered with from five to six inches of snow; and, before noon, the average depth of snow was eight to ten inches, many drifts being three to five feet in depth. This presented a good opportunity for the securing of unusual Jerusalem pictures, pictures of winter sports, sports such as would naturally be indulged in during such an uncommon event, by adolescents coming from northern climes where such sports are very matter-of-fact after a fall of snow. Naturally, we "snapped" after the first clearing, lest the snow should begin to disappear, and thus we would have failed to show the depth of snow to the best advantage in many of the pictures. But, to our surprise and delight, snow fell again and again, so that we had time, not only to get pictures, but to make sleds and skis, as the ground was well covered for several days after the storm was over. It is needless to say that the greater part of the next few days was spent coasting, skiing, sliding, making igloos and snow men; and last, but by no means least, snow-balling, which was quite a new experience for the natives. The possibility of northern winter sports in Jerusalem was a novelty indeed.

This storm was general over a large part of Palestine, sleet fell during most of the storm; and, at intervals, large hail. No doubt many places suffered to some extent, but none as much as Jaffa. Not a ship dared show itself during those days on the foaming sea, except one or two fishing smacks, which

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JERUSALEM UNDER SNOW. DOME OF CHURCH OF THE SEPULCHRE IN CENTER. MOUNT OF OLIVES IN DISTANCE

were driven ashore. A great portion of the Jaffa orange crop was damaged by All the shipping business was brought to a perfect standstill. The oranges al- the hail knocking the fruit off the trees, bruising it so as to cause deterioration. ready packed and going off by the shipload had to remain on the wharf; those employed thereon being left idle. About thirty large lighters, used for transporting oranges and other kinds of cargo from the docks through the rocks to the ships, were lost, some dashing against each other and smashing, while others were swallowed by the waves. Several houses along the beach were

SLEIGHING IN THE ORIENT

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also destroyed by the waves. In one case a large lighter was dashed against a house, breaking in the walls of two rooms.

The bodies of two Italian fishermen were found on the beach, having drifted from some wreck; while one fishing boat, finding itself at the mercy of the sea, at once headed for the shore, where the occupants were able to get to land with their lives. The wooden landing stage was washed entirely away, not a trace of it being left. The line between Jaffa and Jerusalem was blocked with snow so that even the railroad traffic was brought to a standstill. The Kedron, which, properly translated, is the "Winter Torrent," began flowing quite strong with the melting snow, as did also many other brooks in the surrounding valleys. The beds of these brooks are always dry during the summer months.

After such a storm and heavy rainfall, Palestine quickly changes its color from burnt sienna to a beautiful green. Any one equipped with a good Eastman Kodak, plenty of film and developer, along with a developing-tank and hypo, taking a trip through the country about the latter part of April, may feel sure of finding an abundance of good subjects, both in the way of picturesque types and interesting scenery. Picturesque Bedouin tents are often seen pitched amongst myriads of flowers of various colors. Children of all ages, half clothed, are to be found playing, almost hidden, amongst the high growth of the plain of Esdraelon and the shores of the Sea of Galilee. Numerous types of every description, all going to make odd and interesting snapshots, are met with constantly. Such a trip is one that the writer would particularly recommend to the tourist photographer.

STEREOSCOPIC DEPARTMENT

Not A Bad Suggestion

By Walter M. Anthony

Recently, in looking over some old copies of "Photographic Mosaics," I ran across a little article by C. W. H. Blood, entitled: "A Plea for the Stereoscope." As I know of the gentleman, and know of the property he bought years ago, from the proceeds of his photographic work, the article was very interesting. And what is more, it gives me a suggestion that I shall carry out in my own stereoscopic work at home. Following is the little article, written in 1899:

"A young photographer recently told me that the stereoscope was dead.

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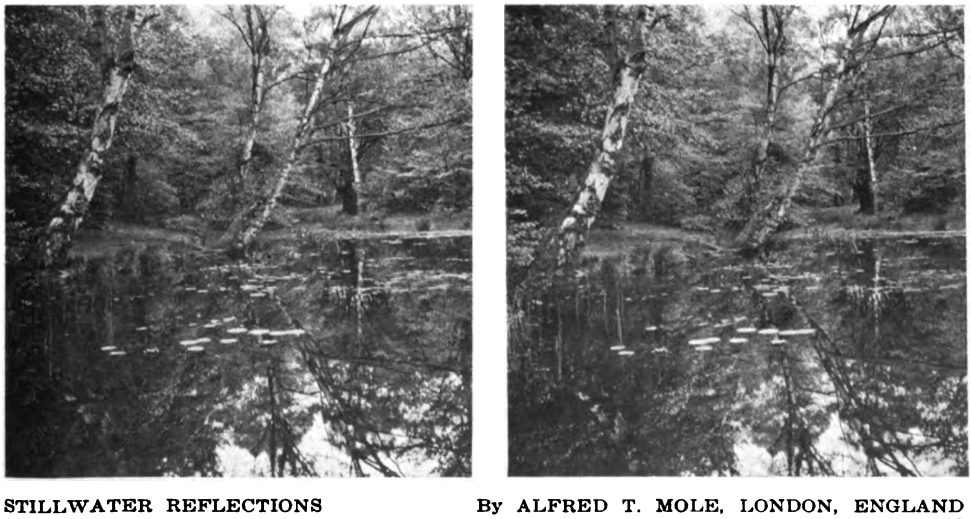
If so, I am very sorry; not for the stereoscope, but for the photographers who have to do without it. I took stereoscopic pictures in the daguerreotype days, and I took them steadily for thirty years afterward. There is nothing to equal the beauty of a good stereoscopic picture. My favorite style was full length, standing in a room with quite a little furniture. Instead of a background, I had a double doorway hung with heavy curtains drawn not quite close, so that a glimpse of the room beyond could be seen. We never had anything but full length in those days; such modern innovations as vignettes or large heads were unthought of, and if stereoscopy were revived today, the old plan would have to be followed. To take big heads would necessitate retouching, and that would be fatal. Even such things as a spot, or a slight scratch, hurt the effectiveness of a stereograph very much. The reason for using furniture, and especially of showing a glimpse of the room beyond—which, by the way, must not be too prominent, but must be toned low in key—is that many objects give a much more vivid sense of relief than would be the case with a single figure placed before a plain background. Some people have a slight difficulty in seeing stereoscopic pictures, and, as a first impression is everything, it is very necessary to let the picture be as apparent as possible. I am sure that if the stereoscope were re-introduced by a man with brains, and on the lines I have suggested that lots of our younger boys would do what I did. I made money enough to buy a block in the town, and now that both the city and myself have 'grown up with the country,' I don't think there is any fear of my having to go to the poor-house. I grew up with Pennsylvania; but there are lots of States left where the young man has just as good or better chance than we old ones had on the Atlantic Coast when we started in fifty years ago."

Now is there, is there, a more welcome sight on the footstool than the man who does his work well, and does it well because he likes to do it well, because he is proud to do it well, because it is right that he should do it well? No, there is not.—HENRY B. FULLER.



STILLWATER REFLECTIONS By ALFRED T. MOLE, LONDON, ENGLAND

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

TO COLOR BRASS BLACK: Dissolve blue vitriol in hot water and add washing soda; allow precipitate to form and pour off clear liquid; the precipitate is carbonate of copper, which, mixed with strong ammonia and heated to 150 deg. F., will stain brass matte black if dipped into it; be sure and clean article well with potash before staining.

DEVELOPER FOR CYKO PAPER: Although I have experimented considerably, I have been unable to find a developer for Cyko papers that was better than the one published on the top of the box in which Argo soda is put out. It is cheaper than ready prepared developers and gives prints that are free from abrasion marks.—Cyko Enthusiast, Michigan.

TO FIND THE FOCAL LENGTH OF A LENS: Of the many different ways for finding the focal length of a lens, the following, I believe, will be found to be the best, since in using this method, the diaphragm point of the lens is not utilized: Focus so that the image, when reflected on the ground glass, is of the same size as the object. Measure the distance between the image and the object, and divide this distance by four. This will give the focal length of the lens.—D. A. Tyrrell, California.

WAXING PRINTS: Prints on matte and platinum surfaced gaslight papers can often be given a very pleasing effect, for some classes of work, by waxing. A good waxing solution is made by adding four and one-half ounces of white wax, cut fine and dissolved by shaking, and two ounces of the lightest colored Japan dryer to six ounces of best spirits of turpentine. The dryer cannot be obtained perfectly colorless, but the less yellow it is the better. The solution is applied by sprinkling a little on the print and rubbing it well over the surface with a piece of cheesecloth or other soft fabric that will not deposit lint.—C. T. Smith, Oklahoma.

A PIECE OF STOUT CORD: The outdoor photographer should always carry a few feet of stout cord, the kind sold for fishing tackle is good, when going afield. Double it, tie one end to the tripod head with the loop just clearing the ground, where by inserting the ball of the foot, the camera can be held steady when an exposure has to be made in a wind. Often an offending

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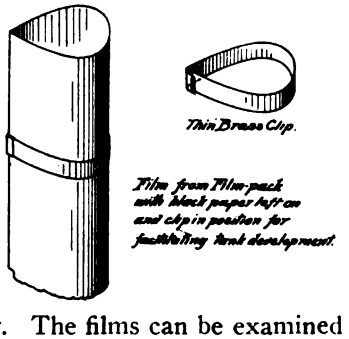
limb of a tree can be caught and held back out of the view by fastening a small weight to one end and throwing it over so as to catch itself. Closing the blade of a knife on one end of thirty-nine inches of the cord will give a pendulum that swings in one second, for timing exposures. A hole through the edge of the lens cap will allow it to be fastened to some part of the camera front where it cannot fall off and become lost. The tripod screw is another part that is apt to wander if not tied. The head of my own tripod screw has a hole drilled through it for the purpose.—C. S. Robinson, Indiana.
cuts true, as it should.—W. H. B., Maine.

A HANDY TOOL: Our family is not a small one and there is, from time to time, a tooth brush to be replaced, and we always buy the kind with a hole in the end of the handle by which it may be hung on its individual hook. None of these discards are thrown away; the brush is broken off and the rough end filed down to a rounded, pointed or flattened shape. Then, with pieces of ordinary elastic cord, they are suspended above the developing tray, the mounting table, at the side of the printing bench, and elsewhere. They come very handy as plate lifters, for rubbing down places near the edge of prints that do not adhere well in mounting, for picking up a sheet of paper from the back of the printing frame, as paper folders in making covers, and as embossing tools with a brass form below the print. Equip yourself with one or two and you will find their uses multiplying.—"Ben," Texas.

DEVELOPING FILM PACKS: I had, some time ago, a large number of packs to develop; and, not having a regular tank, set about to devise a makeshift. I cut from sheet copper, the only suitable metal I had at hand, twenty-four strips, ¾x4½, bending back three-eighths of an inch at one end of each, not making the bend too sharp. The sheet copper was first well cleaned with fine emery paper, and they have remained cleaned for over a year by being simply rinsed in clean water when through. Spring brass, nickeled, would, of course, be the best material to use. The size mentioned is right for the 4x5 size of film. This metal clip is bent into position and the film inserted, just as in the space in the proper tank. The black paper is left on, and the torn end of the paper is put downward to avoid markings such as sometimes occur in tray developing. The films can be examined more easily than when developed in a tank, as they slip in and out of the clips very easily. I use a stone jar or tank for developing, one that holds twelve of the clipped films, employing a twenty-minute developer. I keep the films moving about, removing the fully developed ones and inserting new ones until all are done; changing the developer when necessary.—W. M. Horsley, California.



BLISTERED PRINTS: Reading J. M. K.'s note on blisters in the February number, I am prompted to give my experience along the same line. I, too, seldom am troubled with blisters, but recently had a few on some 11x14 prints on glossy paper, intended to be squeegeed. The thought came to me, Why not

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open the blisters carefully, relieving the pressure, and then induce the "two skins" to reunite as we do with a blister on the human cuticle? I placed the blistered prints, face down as usual, on the ferrotype plates, directly from the wash water, pricked the blister through the paper from the back, allowing the imprisoned air to escape, and then carefully rolled down with a blotter over them. On peeling them off, when dry, it is very rarely that a trace of a blister can be found, and I have never lost a print from that cause since adopting this treatment.—J. A. Zimmerman, Pennsylvania.

EROGEN FOR DEVELOPING PAPERS: I have an Erogen formula that I like very much, using it almost exclusively for my prints. It is compounded according to the directions on the bottle, with one or two exceptions. I use, in my developer, instead of the ten per cent bromide solution, a restrainer, also made by the Letol people. Here is my formula:

Water	16 ounces
Erogen	70 grains
Sulphide of Soda	240 grains
Carbonate of Soda	160 grains
Letol Restrainer, as directed	24 drops
Iodide of Potassium	10 grains

I like this developer, because, unlike those containing Metol, it does not poison my skin. For my own part, I believe there is nothing like good, old pyro for developing plates. In making the above developer I take three or four ounces of real warm water and dissolve the chemicals in the order given, finally making the amount up to the required quantity, sixteen ounces. I think this gives me a solution in which the chemicals are more thoroughly dissolved, the hot water being a much better solvent than cold.—I. C. Adams, California.

A HIGH GLOSS ON PRINTS: I have always been averse to imparting information, although a little will leak out now and then, particularly in the case of friends who are really desirous of learning, the kind who read Camera Craft in order to get new ideas and apply them. Not long ago a fellow I. P. A. member wanted to know how to polish or enamel some prints on soft carbon and portrait surface papers. I suggested that a little rosin and gasoline would answer the purpose. Take a small tube such as a five-cent M.-Q. developer comes in, and fill it half full of powdered rosin. Fill a half pint bottle up to within about an inch of the top with gasoline, dump in the tube of rosin and set aside, well corked, until the latter is dissolved. An occasional shake will assist. To use, pour the solution into a tray and immerse the prints. The longer they are in the bath the harder and brighter the gloss will be after the prints are hung up and allowed to dry. If the whites are a little yellow, use less rosin by adding a little more gasoline. The drying must be done away from dust, of course. The varnish, for so it is, can be removed from the tray and fingers by using some gasoline containing no rosin. I have used this on many of my prints, after first coloring them with water colors, as it protects them from all moisture in the air; in fact, makes them waterproof.—G. A. Hawkins (I. P. A., 2626), Texas.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, JULY, 1911 No. 7

Our Advisory Board

At this writing, twenty-six of our readers have signified their willingness to act upon a proposed advisory board as outlined in one of our recent issues. We want between forty and fifty, in order that the replies to a mimeographed letter gotten out by us each month will be of such a number that any decision arrived at from the opinions expressed therein will be fairly representative of the opinion of our friends, our readers. Our idea is this, formulating it mainly from the twenty-six letters already received: We will get out a letter each month and send it to the forty or fifty members of the "Board." All they will be expected to do will be to reply and express their opinion or make such suggestions as they see fit concerning the topic or topics dealt with in our letter. For example, should we contemplate starting a new department in the magazine, our monthly letter would ask the members of the board what they thought of the matter. From the replies we would be able to judge as to the advisability of going ahead with the idea. This would be so much better than starting it, running it a few months, and then finding that it was not popular with our readers. An editor, particularly an editor of a magazine devoted to a special subject, is sadly handicapped by the fact that he must, to a great extent, remain in ignorance as to the wants of his readers. Not infrequently does he receive letters assuring him that his magazine is all that the particular writers wish, but he knows that there may be hundreds of others who are of a different opinion. Some years ago, one of our photographic magazines devoted a large number of pages in several successive issues to a special subject in which not one photographer in a hundred had even a passing interest. In talking the matter over with the publisher, questioning the wisdom of so doing, he assured us that he had received more letters of commendation on that particular series of articles than on any that had ever appeared in the magazine. This we could easily understand. The average reader rarely troubles to write an editor expressing his satisfaction at the general contents of the magazine; but, let some special subject be given prominent space for several months, and a few specialists who are interested in that special subject, surprised at the unexpected concession to their particular hobby, all write in and tell the editor how greatly gratified they have been made. With an advisory board such as we hope to form, a like mistake could easily be avoided. And the example cited above was a mistake, and a serious one, as the history of the magazine soon after proved; but the damage was done and could not be repaired. The reader does not understand what a real difficulty is involved.

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A magazine of general circulation, with a large news-stand sale, can quickly gauge the feelings of its readers. Sales rise and fall from month to month, and any mistake can be quickly corrected. With a photographic magazine the matter is different. Its circulation is mainly through annual subscriptions, and it may be months before its editor can discover that he is not giving his readers just the kind of a magazine they want. Send in your name and say you will act on our "Advisory Board." All we want is a brief reply to our letter each month. It will take you but a few minutes each time, and you will be rewarded by the satisfaction you will derive from having a word in the management. Our letters will be of interest to you, giving, as they no doubt will, a closer insight into our aims and ambitions in getting out this magazine. Can we not have your acceptance of a membership on the board, please?

A Society of Color Photographers

The responses to our editorial in the May issue under the above heading have been most gratifying, particularly when we consider how few photographers have had the courage to take up color photography in this country, where the necessary material is not generally obtainable. We have one of the portfolios of the Society of Color Photographers of England and will, very shortly, route this to the workers who have written that they are interested in the formation of a like society in this country. The next thing will be the getting together of a portfolio of work produced by American color workers, to be routed in turn to those interested. In the meanwhile, the actual formation of a society and the selection of officers will be given attention. It has been suggested that the same plan be followed as in the case of the English society, the selection of four directors and a secretary-treasurer. Preceding the sending around of the English portfolio, we will send out, over a route list made up of the names and addresses of those who have signified their interest, an outline of a proposed form of organization, asking for suggestions thereon. Upon the selection of a board, these suggestions will be turned over to the members thereof, and organization at once effected. Any of our readers, subscribers or otherwise, who are interested in color photography are requested to send in their name and address to the end that they may take part in the formation of the society and enjoy the privilege of seeing the work of others, particularly of these English workers, some of whom have achieved most remarkable results.

The National Convention at St. Paul

By the time this reaches our readers, it will be too late to do much corresponding with the officers concerning displays, membership, and the like, but should any reader decide, at the last moment, that he cannot afford to miss the splendid opportunity, he need not allow his anticipation of profit and pleasure to dampen in the least on that account. If you send pictures, do not send more than three; send them prepaid, addressed Ben Larrimer, First Vice-President, St. Paul, Minnesota, care St. Paul Armory, and have them there on or before July eighteenth. Excellent hotels, rates ranging from a dollar to two dollars and a half, and upward, per day, European plan, are convenient

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and will not be crowded. The membership fee is two dollars, and one year's dues, three dollars. This can be sent to L. A. Dozer, Treasurer Photographers' Association of America, Bucyrus, Ohio, or paid upon reaching the convention.

It was hoped that a number of professionals from this city would attend the National in a body this year, but those interviewed seem somewhat depressed by the poor business of the last few months and they all seem to dread a trip East at this season of the year. We have had letters from a number doing business in other Coast cities, saying they were thinking of attending, and trust they will carry out their intentions. Another year, with better business, and with the added incentive of perhaps being able to bring the National to this city in 1915, we hope to be able to report a large attendance of Pacific Coast photographers.

The Pacific Northwest Convention

This paragraph is put in simply to remind our readers in the Pacific Northwest that they have an exceptionally energetic and enthusiastic set of officers, all up to their ears in work in an effort to give them the best convention they have ever had. It will be the eleventh, and they realize fully that they will have to surpass the results obtained by ten other good organizations. The local men, known as the Tacoma Club, are neglecting their business to prepare for the provision of entertainment during the gathering; in fact, the officers are objecting that they want to occupy entirely too much time with their clam bakes, negro minstrels, and the like. Send your name and address to J. E. Ralston, Secretary-Treasurer, 416 Epler Block, Seattle, Washington, and tell him you may attend if the inducements are strong enough. And remember the place and date: Tacoma, September fifth, sixth, seventh, and eighth.

Tripak Pictures On Paper

Negatives made in a Tripak camera, using the Tripak system, can, of course, be printed on paper by the pinatype or superimposed carbon process, but the production of good color pictures by these methods requires somewhat more skill and practice than the average worker cares to devote when he can so easily produce such perfect transparencies in colors with a fractional part of the time and trouble. And this must not be taken as meaning that color prints on paper are not well within the power of a careful worker, for many have found these two printing processes sufficiently fascinating to justify their taking them up. But just too late for our last issue we were advised by Mr. Ives that a very simple and beautiful compromise process was nearly ready for the use of Tripak photographers. In it, special thin Tripak films are superposed on a white paper or card base or backing, to be fitted with a metallic mat or glass cover, and a cushioned back to keep them in perfect register and contact. When made, they have exactly the same appearance as glossy, natural-color photographs on paper in a passe partout mounting or frame. This news will interest many of our readers who have purchased Tripak cameras or contemplate doing so.

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Why Is A Congress?

To all of us who were fortunate enough to participate in the sessions of the Congress of Photography, at Milwaukee, further questions of intents and purposes would seem superfluous. But I have been asked to furnish the photographic press with an article, relating to the Congress, and this is the way it looks to me. The Congress, composed as it is, of elected representatives from all of the minor associations, must prove a strong factor for safety. It is natural to presume that these delegates are the best available timber in the Association, and competent to analyze any proposition that may be brought before them and reach the proper conclusion.

We all know that some ill-advised motions have passed on the Convention floor because of lack of deliberation and understanding on the part of members of the Association and by bringing questions effecting our welfare before the Congress we may reasonably expect better results in legislation.

Now the State associations affiliating with the Congress, will receive even more benefit, for they are then an integral part of the Photographers' Association of America. Then there is the material benefit in the saving of initiation fees, and the difference in the annual dues, all of which is explained in the Constitution.

This year at St. Paul, there will be many questions of vital importance brought before the Congress that may lead to great results. In the matter of selecting meeting places, we must realize the possibility that sufficient votes might be secured on the floor of the Convention, to hold the meetings in the same section of the country indefinitely. This is surely a dangerous condition, and might sometime result in the disruption of the Photographers' Association of America. For a remedy, we propose a line dividing the East from the West, photographically speaking, together with an amendment to the Constitution, providing that annual meetings shall be held alternately each side of the line.

I trust that all delegates will give this their careful consideration and come to St. Paul, ready to carry the matter to a successful issue. Another question that might receive our attention is the proposed Parcels Post, or perhaps a special photographic rate. Express rates might be altered to our advantage; in fact, anything effecting the welfare of photographers may be discussed and recommendations made to the Photographers' Association of America for final action. The academy project, although it has passed from the hands of the Congress, may yet require further consideration by that body. While the Congress of Photography is only two years old its work has proved so effective, and its power for good so great, that it is safe to predict wonderful achievements for the future.

BEN LARRIMER,
First Vice-President, P. A. of A.

PHOTOGRAPHIC MUSEUM TO HONOR DAGUERRE

Thomas W. Smillie, F. R. P. S., official photographer of the Smithsonian Institution, is preparing an exhibit of photographs which, when completed, will illustrate the development of the photographic art from the time of the discovery of the first process by the Frenchman, Neipce, in 1824, to the present time.

This exhibit will consist of a collection of five thousand photographs, which, when gathered, will be placed on exhibition either in the National Museum or the Smithsonian Institution in Washington.

Perhaps the most interesting pictures of the collection are two Daguerreotypes of Daguerre himself. One of the photographs of the inventor of the perfect method of photography was loaned for the collection by Mrs. Vallentine, of New York, while the other was presented to the National Museum by Mr. Cramer, of St. Louis.

Mr. Smillie is of the opinion that the Daguerreotype method has never been excelled. Even the most modern and up-to-date methods, he claims, do not produce the fineness and satisfactory results obtained by the old slow and cumbersome method on the silver plate.—Washington *Herald*.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

SNAP SHOTS IN DULL WEATHER

A correspondent in Pennsylvania writes to ask how it is that a fellow worker is able to take snap shots in dull weather, while he meets with but poor success. The question is a hard one to answer without knowing more about the methods employed or the conditions under which the pictures are attempted. The question is one that comes up early in the experience of almost every amateur. He has an idea that there is some particular developer that will enable him to set aside the ordinary restrictions of photographic practice; but there is none. Where the trouble really comes in is in the failure to distinguish between lack of sunlight and a light that is really lacking in actinic quality. One shows a picture that was taken in a fractional part of a second and explains that the day was overcast, referring to the lack of shadows to substantiate the statement. But the experienced worker finds out that the sun can be obscured by clouds that cut off its direct rays, while yet the opposite sky reflect an amount of light that makes for almost as quick an exposure as if direct sunlight fell upon the subject. It is also often the case that, during a rain or during an interruption in the fall, an exposure can be given, even with sunlight wanting, that need be but little, if any, longer than sunlight would require on another day in which the atmosphere lacked the purity that the rain produced. The only way in which the necessary exposure can be determined under such conditions is by using some sort of an actinometer, and a simple test along the lines suggested by Mr. Steadman for using Solio paper, is perhaps as good as any for comparative purposes. One who will make such a test under varying conditions in which sunlight is more or less cut off, will be surprised at the widely differing strength of the light when apparently of about equal degrees of luminosity, as judged by the eye alone. For snap shots in dull weather, a fast plate, slow development, and an appreciation of the differences pointed out, will give about all that is possible.

CLEANING ROUGH PAPER PRINTS

A Michigan correspondent wishes to clean a number of bromide prints that have become badly soiled, and writes to ask the best method of procedure. Make a thin paste of ordinary flour and cold water and spread it over the surface of the print with a soft brush. Place the print on a sheet of clear glass and after eight or ten minutes let a spray of clear cold water play upon the print until the paste is washed away. This is best done by pinching up the end of a rubber tube slipped over the end of a faucet. It must be remembered that any spotting or the like will be removed as well as the dirt. The process is applicable to bromides, platinums and carbons, and can be repeated if the first operation does not remove all the dirt.

FASTENING LABELS TO TIN

A Chicago correspondent wants an adhesive that will stick paper labels to tin so that they will not drop off in the course of time. Looking it up I find a number of suggestions, so will give them all. Roughen the surface of the tin and use a paste containing a little butter of antimony. Use silicate of soda (water glass) as an adhesive. Use a hot solution of gelatine in acetic acid, one ounce of gelatine to four ounces of acid. Apply oak varnish and allow to dry before pasting down the label. Use paste made of rye flour. Use a paste in which magnesium chloride, honey, glycerine or calcium chloride is an ingredient.

A STRONG INTENSIFIER

An intensifier, one that gives more dense contrast than mercury, may be employed as follows: One part of iodine and two parts of potassium iodide are dissolved in ten parts of water to form a stock solution which keeps. To prepare a bath, take one part of stock solution and dilute with ten

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parts of water. The negative is placed in this until bleached yellow. It is then well washed, and put into the following:

Water .....1 ounce
Schlippe's salt .....5 grains
Caustic soda .....2 grains

This turns the image a red-brown color, which is very opaque to actinic light, and gives a greater printing opacity than one might suppose from mere eye inspection. The plate requires washing and drying in the usual way.

PYROCATECHIN STAND DEVELOPER

A very useful pyrocatechin stand developer is prepared in the following way:

A: Water .....25 ounces
Sodium sulphite..... 5 ounces
Pyrocatechin ..... 1 ounce
B: Water .....25 ounces
Sodium carbonate.... 5 ounces

For use, one part each of A and B is added to fifty parts of water. The time of development for a properly exposed plate is about one hour.

MEDIUM FOR WATER COLORS

Instead of water, the following medium should be used when printing-out prints are to be tinted with water colors:

White of egg..... 1 ounce
Glycerine .....15 minims
Ammonium carbonate... 20 grains
Liquor ammonia.....15 minims
Water ..... 2 drams

The white of egg should be well beaten up and allowed to subside, and then the ammonium carbonate and the glycerine and ammonia added to the solution.

WATER-PROOFING BOTTLE LABELS

An old celluloid film cleaned and cut up into small shreds may be placed in a bottle and covered with amyl acetate, or acetone. After a few shakings and a little time it will dissolve and give a clear fluid, which may be brushed over the labels with the aid of a soft brush or feather. Another useful mixture for this purpose may be made by dissolving Canada balsam in chloroform.

MENDING EARTHENWARE DISHES

Dissolve a small quantity, say twenty grains, of zinc chloride in twenty to thirty minims of water. Place a teaspoonful of zinc oxide on the back of a dinner plate, add enough of the zinc chloride solution to make a cream, and rub out all the lumps, using for this purpose an old table-knife. Thoroughly dry and warm the edges of the broken dish. Apply the creamy mixture, and then bring the edges together and press well into contact and allow to dry very thoroughly.

QUICK SENSITIZING OF CARBON

Make up a ten per cent solution of potassium or ammonium bromide, using hot water. Filter when cold and then add an ounce and a half of pure acetone to each ounce of the solution. If potassium bichromate is used, a few crystals will be thrown down but they are to be disregarded. Pin the sheet of tissue to a board, pour some of the solution in the center and rapidly spread it as evenly as possible over the entire surface, using a broad camel's-hair brush. This spreading must be done by brushing first across in one direction and then in the other, continuing until the brush has a just perceptible inclination to stick. Hang the tissue up away from the light and it will be dry and ready for printing in from ten to twenty minutes according to circumstances.

BLUE BROMIDE PRINTS

For the benefit of a New York correspondent we would say that the following process has not been tried by us; but, coming from *Das Bild,* the trade journal of one of the largest manufacturers of bromide paper in Germany, it can be given credence. The prints should not be developed too far, well washed, and thoroughly fixed. If dry, they should be soaked in water until perfectly limp. Make up two solutions as follows:

A: Potassium ferricyanide. 40 grains
Distilled water ..... 10 ounces
B: Ammonia iron alum...250 grains
Hydrochloric acid....250 minims
Distilled water..... 5 ounces

For use, mix:

A solution ..... 2 ounces
B solution ..... 1 ounce
Water .....10 ounces

The prints are immersed in this bath until the desired color is secured, and then well washed until there is no longer any yellowness remaining in the whites. A more transparent blue is obtained if the prints be then fixed in a ten per cent hypo solution and again well washed.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

PHOTOGRAPHING MACHINERY IN POSITION

A good deal of my photography during the last few years has been in connection with my own profession—engineering; and I have found it very useful, on more than one occasion, to be able to make a record of the appearance of a machine after erection. So much so that, if it is in any way possible, I now never leave the work without having a photograph of it in position. As I am concerned with power plants put up in factories and other buildings away from the works in which they were made, the lighting conditions are of the most varied kind, and it sometimes happens that the work is so enclosed that it cannot be photographed at all. In most cases, however, some sort of picture is possible, but the demands made on one's apparatus are extreme.

The first consideration for work of this kind is the apparatus. A stand camera is an essential, and it should have both a rising and cross front and a swing back. A short-focus lens is also a necessity. I do not care for the strained perspective given with a wide-angle lens, and my outfit for ordinary photography includes both a lens of average focus, say seven and one-half inches for a half-plate, and a telephoto. But a four and three-quarter-inch lens which, well stopped down, will cover the half-plate and allow of the use of the rising front is almost always found to be necessitated by the circumstances of the case. Plates should be of the fastest kind, and backing is a necessity, on account of the reflections from bright parts.

The "pose" of a piece of machinery may seem a strange expression, yet this is a subject which must have very careful attention if the photograph is to show it at its best. Reciprocating parts should not be shown at the end of their travel; their function and form are much easier seen, as a rule, if they are in some intermediate, but not exactly intermediate, position. Even such a detail as a row of lubricators, or of cocks or switches, looks better if they are all arranged in the same position.

As far as the surroundings of the machines are concerned, in my own case there has been little trouble. They are generally erected in a building with limewashed walls, without other mechanism intruding upon them, and when the walls have been dark in color, a bucket of whitewash has made all the difference. When this was impossible, I have got a similar result by covering the walls with newspaper. The floor can be left as it is, if a light floor is wanted to show the boundaries of the apparatus, it may be lightly sanded. A banner, made by gumming together a number of newspapers and mounting them on a light framework, is sometimes very useful. It may be carried by a couple of laborers, who are instructed to keep moving it about during the exposure. It will then show no irregularities on printing, but will appear as a plain light gray background.

Although daylight is generally available, it often simplifies the work considerably if it is not used. In most cases, the daylight comes from the only direction in which the camera can be placed, and this gives a flat lighting. Moreover, if the camera has to be in an open doorway or even out of doors, looking into a dark building, an exposure long enough to show the machinery will nearly always be found to give a foggy negative, presumably from light reflected from the lens mount, flare, etc. In such a case, I prefer to get all ready by daylight, and then to wait until dark, when the work can be photographed by magnesium. The whole secret of photographing machinery by magnesium lies in the use of plenty of the metal and of ample diffusion. An old packing case can be employed, standing it on end, with its open side covered with tissue paper. A few yards of ribbon may be cleaned with glass paper, plaited together, and hung up in the case, with a tin with a few drops of methylated spirit underneath the lower end. When all is ready, taking care that the light can-

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not shine directly onto the lens, a match is put to the spirit. While the ribbon is burning, I usually light another piece and wave it about beside the camera so as to get some illumination onto the darker shadows. Magnesium is cheap enough to allow of a liberal supply being used, and the tissue paper acts as a diffuser, the lighting obtained being practically identical with what would be got from a window, admitting daylight, in the position of the box. Without a box, if the exposure is prolonged, there may be trouble from illuminated smoke.—C. E. Goodchild in *Photography and Focus.*

HOME-MADE DARK-ROOM SAFE-LIGHTS

When the importance of keeping negatives free from fog is considered, the number of amateur photographers who buy just "any sort" of lamp with "any sort" of red glass in it is remarkable. The use of unsuitable glass or fabric invariably leads to fogged negatives, with poor printing qualities. With such negatives, after-treatment is more difficult, and the task of making a decent lantern slide almost impossible. If the following instructions are carefully carried out, the worker will have the proper kind (quality) of light for each of the dark-room purposes.

The dyes required are tartrazine or brilliant yellow, methyl violet, and malachite green.

The violet dye, a fine powder, is liable to float about in the air, and will stain badly anything with which it comes into contact. It should, therefore, be placed at once in six ounces of water. One dram of the green dye, and one dram of whichever of the yellow dyes has been selected, are each placed in five ounces of water. This should be done the day before they are used.

There are three ways in which the safe-lights can be prepared.

1. If the lamp is a small one, dry plates may be fixed out, thoroughly washed and dried, and, when cut to the proper size to fit the lamp, the plates are dyed.

2. If the lamp is a large one, plates are expensive to use. A substitute can be made by coating glass with gelatine. An ounce of any ordinary gelatine is dissolved in eight ounces of water in the following manner: The gelatine is cut into shreds and covered with the water. When it has become quite soft, the vessel in which it has been soaking (a jam jar is useful for the purpose) is placed in a pan of water, which is then gently heated until the gelatine is perfectly liquid. The sheet of glass to be coated is warmed, the gelatine poured on, and the glass left in a perfectly level position (a level must be used) for the gelatine to set or harden. One ounce of the solution is sufficient for a sheet ten inches by eight.

3. The last method is to dye sheets of thin, transparent paper. A paper suitable for the purpose must be very thin, tough, and transparent. Butter paper, as used by the grocer, will do, if it can be got thin enough.

Whatever material has been selected with which to make the screen is placed ready to hand. To make a complete set of screens, six glasses or papers are required. One sheet is placed in the violet dye for five minutes, then transferred to a dish of water, well rinsed, mopped with a wad of cotton-wool, and put up to dry. A fixed-out lantern plate is treated in the same manner, except that it is very well washed, as the violet stain in this case must not be too dark.

The dish, if the same one is to be used for the other colors, should be well washed, as the dyes should on no account be mixed. Two of the glasses or sheets of paper are placed in the green dye, and the same procedure is carried out as for the violet dye.

The remaining three glasses or papers are then, in the same way, placed in the yellow dye and dealt with as just described.

The violet-stained glass and one of the yellow ones are now placed film to film and tried in the lamp. If the combination is too dark, the violet glass is again washed until it becomes lighter. When found to be right, the two glasses are bound up in the same manner as a lantern slide. When the violet and yellow glasses are placed together, they will be found to make a ruby screen, which cuts out all rays of light sharply up to the red. The two yellow glasses are bound up in the same way. They are not likely to be too dark.

The green plates are also bound film to film; but in this case a sheet of paper which has been dyed yellow is placed between the glasses.

The photographer has now three classes of illumination from which to choose. When developing orthochromatic or fast ordinary plates, he can use the ruby screen. For slow ordinary plates, lantern plates, and bromide

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paper, the green screen may be used. When one first works with the latter screen, there does not seem to be much light, but after five or six minutes have passed, the eyes having become accustomed to the color, one feels it would not be safe even to open a packet of gaslight paper in such a light. This is, however, a perfectly safe light. Of course, this does not mean that the dish can be held for any length of time right up to the lamp. Ordinary precautions must be taken, and the plates must not be unduly exposed. The yellow screen is for bromide paper. It allows a good deal of properly colored light to pass, and is safe and pleasant for work.

If paper has been dyed, the papers, two green and one yellow, two yellow, and one violet and one yellow, are placed between sheets of clear glass. The paper must be well washed after it has been dyed, as there is some light lost from the material itself, and so the color must not be too deep.

Should the lamp in use not be provided with facilities for inserting and removing the different glasses, it is only necessary to have one sheet of clear glass permanently fixed in position. A strip of stiff black paper, say an inch wide, and the length of the glass, is taken, doubled lengthwise, and to one of the halves paste or glue is applied. The strip is then fastened along one edge of the glass, and similar strips are applied to the other three sides. The dyed papers may then be cut slightly less in size than the glass, placed in position, and the edges of the black paper folded over to hold them. It is not advisable to adopt this method if the papers are more than seven or eight inches across, as beyond this size they are liable to fall at an unwelcome moment. Black paper can be pasted over any portion of the glass that is not wanted.

The lantern plate which was stained violet is to be placed on the yellow glass lens cap of the enlarger. This will then allow time to fix up a dry plate on the easel when making enlarged negatives.

The yellow glass lens cap, which is usually supplied with an enlarger, allows too much light of the wrong color to pass; whereas, with the addition of the violet glass, one may take a reasonable time over the work without fear of double images or of fog.—Easten Lee in *Photography and Focus.*

PYRO STAINS ON THE FINGERS

I have often noted writers in your columns, in praising pyro, refer to the stains it causes on the fingers. It seems a great drawback to the use of what is probably the best all-around developer, that one's fingers should be made to look unspeakable, and it occurs to me that your readers will be pleased to know of a method I follow, which insures a complete immunity from stain. I have developed several hundred plates in pyro-soda —ordinary formula—during a week-end, and finished without any trace of discoloration. I think it should be agreed this is a quite sufficient test.

The method is simple. During development, keep the tap running, and have by the side of the developing dish a bowl containing a weak solution of HCl (about one in fifty). Now observe the following: Never, never dip dry fingers in the developer; rinse both before and after, and immediately the plate is immersed in hypo, rinse the fingers again, and dip them in the weak acid. That is all. I have developed hundreds of plates in pyro, and never had my fingers with the suspicion of a stain since following the above method; the acid, being so very dilute, did not have any deleterious effect on the skin.—Stanley Roberts in *British Journal of Photography.*

To the above I may add that those who, unfortunately, have become stained, may remove the same by placing the fingers in the regular permanganate reducer formula and then transfer them to strong solution of oxalic acid until the brown oxide of manganese is removed. It sounds formidable, but if there are no cuts in the skin, it is harmless. In fact, it is the common method of sterilizing the hands employed by surgeons.

A NEW SULPHIDE TONING BATH

Professor Namias, writing in the *Photographische Mittheilungen,* finds fault with sodium sulphide as a toner for bromides and gaslight papers on account of its well-known tendency to oxydize and form unpleasant yellow tones. Professor Namias finds that the substitution of the barium sulphide obviates this. It neither decomposes in solution, nor does it smell strongly of H_2S. While barium sulphide is dearer than sodium sulphide, the use of the solution is more economical, as it is only sparingly soluble in water, two in one thousand. A saturated solution is recommended for use—about one

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ounce of the sulphide to three pints of water. Toning is immediate.

MONOCHROME PRINTS FROM AUTOCHROME ORIGINALS

The English and other journals have recently had references to the making of black-and-white prints from Autochrome originals, and a correspondent of the *British Journal of Photography* seems to think the idea is original with himself. Shortly after the Autochrome arrived on this market, I described and illustrated, in *Photograph*, England (March seventeenth, 1908), the possibility of obtaining such prints by means of a carbon negative from the Autochrome, and I showed that prints from these negatives were very perfectly orthochromatic. I have since been working on the same subject by other methods, and hope soon to publish my results.

AN OIL TRANSFER PROCESS

For those who follow photography as a fine art, the work as well as the words of M. Demachy are always interesting. When we remember that he resuscitated and justified gum bichromate, and after infinite labor and experimentation gave to oil printing much of its present vogue, we shall feel good ground for paying careful heed to any new line of work he may recommend to our consideration. For this reason, I would draw the attention of pictorialists to the three articles in the *Amateur Photographer*, London, for March twenty-seventh, April third, and April tenth. Those who desire to try the new medium must get the original articles; they are too long to reproduce and cannot be usefully abstracted. Briefly, M. Demachy justly complains that oil prints, notwithstanding their excellent qualities, suffer from the fact that the pigment lies on a gelatinized surface. Now, this oil print is in principle and fact little different from a collatype plate, and if the ink image could be transferred to a non-gelatinized paper of desirable surface and tint, the only objection to the oil print would disappear. In this, M. Demachy seems to have succeeded. The process is not easy and the results not always certain, but as he truly says, an artist does not consider difficulty in technique as a serious objection. Briefly summarized, the process depends on making a specially inked oil print on a smooth-surfaced, double transfer paper; this is then passed through an engraver's press in contact with a sheet of damp unsized or half-sized paper of a suitable character. To this the oil print is transferred, producing an image equal to that of a mezzotint. This sounds easy, but no one should attempt the work without first reading M. Demachy's directions. The author states that a fellow-worker, Mr. Billard, has succeeded in using a copying in lieu of an engraver's press. The articles end with the following description of the prints: "The blacks are velvety and deep—much deeper than any oil prints; the halftones delicate and soft. The visible support is made of beautiful hand-made paper, the grain of which can be varied according to our taste. In fine, the qualities of the gum and the oil method are united in one process, to which are added certain other qualities which were, up to now, the property of aqua-fortists."

THE RENDERING OF COLOR

The *British Journal of Photography*, in a note on "Color and Climate," refers to the experience of a three-color worker who adjusted the time ratio of his color screens in England and then went to Italy to take snow scenes and found the white to come out distinctly blue. As I understand him, the writer of the editorial seems to attribute the difference to a lack of color analysis on the part of the worker, but as a matter of fact, the color of snow is always and everywhere dependent on the color of the light illuminating it. When this comes from white clouds, as it is likely to do in England, it will produce a totally different tint to whiteness to that given by snow under a pure blue sky that cannot do other than reflect the color falling on it. Two Autochromes taken under each condition will show this to be true. Furthermore, if any one desires to study the enormous influence of varying qualities of daylight on colored objects, he cannot do better than take an Autochrome of varied tints and turn it from one region of the sky to another and then towards light reflected from terrestrial objects. To many it will be a revelation.

TO WHITEN THE FOOT OF A GRADUATE

In order to make it easier to find the graduates in the dark-room, it is a good plan to paint the foot white. For this purpose, a two-penny tin of bath enamel paint will serve for a dozen graduates.

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NEW MEMBERS.

2930—D. D. McTavish, 912 Heywood Ave., Victoria, B. C., Canada.
5x7 and post cards, printing-out and developing papers, of general views of Victoria scenery, etc.; for general views of other places. Class 1.

2931—G. R. Littlefield, Summerland, Cal.
Class 2.

2932—Marie E. Kaufmann, Box 124, Plattsmouth, Neb.
4x5, printing-out and developing papers, post cards only. Can read and write German. Class 1.

2933 —David J. Sheahan, 112½ Lincoln Street, Lion Hotel, Spokane, Wash.
Class 2.

2934—Wilber H. Crum, 1110 W. Wood Street, Decatur, Ill.
4x5, various papers, of landscapes and flowers; for any kind of outdoor pictures such as landscapes, street scenes, or public buildings, for prints or post cards. Class 1.

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2935—Herbert R. H. Gee, Box 852, Lead, S. D.
3¼x5½, various papers, of mining and scenic views; for miscellaneous views, except portraits. Class 1.

2936—A. T. Hudelson, 1011 Tenn., Louisiana, Mo.
Stereoscopic views, mostly of the Mississippi River; for the same. Class 1.

2937—J. W. Lewis, Box 775, Stockton, Cal.
Class 2.

2938—Harold F. Saunders, 21 Elm, Andover, Mass.
Class 2.

2939—Max H. Lorenz, Ph. D., Sewanee, Tenn.
Class 2.

2940—Carl Abell, Escondido, Cal.
3¼x5½, post cards and developing paper, of typical Western scenes and views; for views of general interest on post cards or developing paper. Class 1 foreign. Class 2 U. S.

2941—Haskell R. Koons, 1335 Scott Avenue, Canton, Ohio.
Class 2.

2942—R. C. Smith, 508 Elm Street, Anaconda, Mont.
3¼x5½ and under, developing paper, of mountains, winter landscapes, camping, and hunting scenes; for scenery, landscapes, snow scenes, marines, etc.; in fact, anything outdoor. Class 1.

2943—R. B. McFarland, Box 357, Tyler, Texas.
3¼x5½, developing paper, of flash lights, interior of residences, snapshots, groups on outside and lakes; for rural scenes, public buildings, lakes, flash lights, and interior of residences. Class 1.

2944—Mrs. Mable Booth, Wellsboro, Ind.
4x5, various papers, of flowers, children, and pictorial landscapes; for prints or post cards. Class 1. (I would like to correspond with members experimenting with gum.)

2945—L. R. Nye, La Crosse, Ind.
5x7, developing paper, of various scenes; for the same. Class 1.

2946—F. L. King, San Miguel, Cal.
3¼x5½, developing paper, of landscapes, and local views; for the same. Post cards and prints. Class 1.

2947—James McArthur, care Coast Inspector's Office, Shanghai, China.
Class 2.

2948—W. E. Jordan, care American Beauty Stove Co., Erie, Pa.
3¼x5½ to 8x10, various papers, of surf, seascapes, river views, and general landscape work; for only good work of general interest or of a pictorial nature, preferably on single weight paper, matte or semi-gloss, unmounted. Class 1.

2949—D. A. Jones, 745 N. Colorado Avenue, Hastings, Neb.
3¼x5½, various papers, of travel and local views; for views of prominent or historical places; post cards only. Class 1.

2950—Wm. A. Kelly, Balboa, Canal Zone, Panama.
Class 2.

2951—J. J. Wirz, 507 Broad Street, Augusta, Ga.
Class 2.

2952X—W. G. Conger, Independence, Mo.
4x5, various papers, of Rocky Mountain and Pacific Coast scenes; for only good scenes from any part of the world. Class 1.

2953X—H. I. Hughes, 2319 Boylston Avenue, North, Seattle, Wash.
3¼x5½, 4x5, 5x7, various papers, of marine, local, and landscapes; for historical, local and marine views. Class 1.

RENEWALS.

504—Wm. A. Bixler, R. F. D. No. 1, Anderson, Ind.
Class 3.

1498—G. S. Smallwood, 3269 Archer Avenue, Chicago, Ill.
Class 2.

1827X—Sam H. Shelstad, Box 202, Brandt, S. D.
Post cards and 4x5, developing paper, of farm scenes and portraits; for sceneries. Post cards only. Class 1.

2219—M. O. Johnson, Jordan, Minn.
Stereo views and post cards, developing paper, of landscapes and different scenes; for any subjects. Class 1.

2493—R. Everett Jenne, Box 40, Coupeville, Wash.
Class 3.

2509—D. C. Davison, Texas City, Texas.
Class 2.

2533—Gilmer Winston, care Union & Planters' Bank and Trust Co., Memphis, Tenn.
Class 2.

2560X—Eugene Remmert, R. F. D. No. 4, Box 112, Lone Wolf, Okla.
Post cards. Class 1.

2655—Mrs. V. H. Watson, Bernard, Maine.
Class 3.

2704X—O. D. Howlett, Wakefield, Mass.
Post cards. Class 1.

2728—P. H. Irving, Box 1691, Calgary, Alta, Canada.
4x5, 3¼x4¼, developing and printing-out papers, of general views; for miscellaneous views. Class 1.

2912X—Chr. Rasmussen, care Bayard Co-operative Creamery Co., Bayard, Iowa.
Post cards. Class 1.

CHANGES OF ADDRESS.

1409—Wm. C. Marley, 49 Milford Avenue, Newark, N. J.
(Was 149 Hillside Avenue.)

1864—A. G. Lindgren, Hasty, Minn.
(Was Ellsworth, Minn.)

1895X—Arthur L. Burgess, 183 Jefferson Avenue, Columbus, Ohio.
(Was 879 E. Long Street.)

1992X—G. J. Schuur, Elizabeth Wolffstraat 75, Amsterdam, Netherlands.
(Was 160, Da Costakade.)

2100—Mrs. R. E. Pennington, care Reclamation Service, Mabton, Wash.
(Was North Yakima, Wash.)

2156—G. Leonard Pitcher, 1050 15th Avenue, S. E., Minneapolis, Minn.
(Was 1321 6th Street, S. E.)

2218—Miss Carrie Anondson, R. F. D. No. 10, Hollywood, Cal.
(Was Fish Creek, Wis.)

2462—N. A. Howard-Moore, 720 Otisco Street, Syracuse, N. Y.
(Was Peterborough, Ont., Canada.)

2541—Dr. St. George Elliott, 101 East 95th Street, New York.
(Was 575 Fifth Avenue.)

2596—Maurice Windus, Pullman, Wash.
(Was Ronan, Wash.)

2620X—E. Whitford, Shelton, Neb.
(Was Fremont, Neb.)

2678—Ross C. Brown, 1482 Detroit Street, Denver, Colo.
(Was El Paso, Texas.)

2723—A. B. Cummings, 3712 Irving Avenue, North, Chicago, Ill.
(Was 2736 Seminary Avenue.) Will repay all prints due members as soon as possible, but have been delayed on account of moving.

2784—Willis Knippel, 7231 Michigan Avenue, Chicago, Ill.
(Was 7626 Eggleston Avenue.)

2837—William H. Luebkeman, 1508 E Street, Sacramento, Cal.
(Was 1105 P Street.)

2861—Chas. Lindberg, 821 10th Street, Munhall, Pa.
(Was Pittsburg, Pa.)

2880—J. H. Helsley, corner Clinton and Grant Avenue, Martins Ferry, Ohio.
(Was Wheeling, W. Va.)

2918—J. O. Stancliff, San Rafael, Cal.
(Was San Francisco, Cal.)

WITHDRAWAL.

2791—S. Waterman, Warsaw, Ont., Canada.
(On account of traveling.)

Division, 4948 Washington Ave., Chicago, Ill.
stamp. Address Charles M. Smyth, 1160 Detroit St., Denver, Colo.

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OUR BOOK SHELVES

"UNDER THE ROOF OF THE JUNGLE"

The author, Charles Livingstone Bull, has, in this collection of jungle stories, given us an opportunity to watch the drama of animal life along the great vine-roofed rivers of British Guiana; an opportunity to do so without the consciousness of that man-presence which so often detracts from the interest, even when in the form of Kipling's philosophical brilliancy. There are fourteen stories, and over sixty full-page illustrations, many of them in colors, the results of the author's months of study and sketching in the almost unknown jungles of these great rivers of South America. The jungle opossum, the armadillo, the boa, pecarri; beast, fish, reptile and bird, all add their quota to the interesting, ever-changing drama of animal life that the author so vividly presents. Published by L. C. Page & Company, Boston. Price, two dollars; postage sixteen cents extra.

"HANDBUCH DER PRAKTISCHEN KINEMATOGRAPHIE"

In this book of over three hundred pages, the author, F. Paul Liesegang, gives a complete and comprehensive exposition of moving-picture practice. The book is well illustrated, containing one hundred and thirty-five cuts; the text matter clear and well arranged; in fact, the subject is practically exhausted. The author's reputation as a writer and teacher along photographic and kindred lines is such that only an authoritative and thorough treatment of the subject could be expected. The book is, of course, in German. It is published by Ed. Liesegang's Verlag M. Eger, Leipzig, Germany. Paper covers, eight marks; cloth bound, nine marks. We will be pleased to order copies for our readers at two and one-half and three dollars, respectively.

ANNUARIO 1911 DELLA FOTOGRAFIA

This splendid annual is the third gotten out by our Italian contemporary, *Il Corriere Fotografico,* and is made up, principally, of abstracts of matter published throughout the world during the past year. There are some four hundred and fifty pages of well-selected text, supplemented by about the same amount of advertising. Some excellent original articles, valuable tables, and a list of all the dealers in Italy, add to the value of the volume. It can be ordered direct from Il Corriere Fotografico, Piazzale Magenta 8, Milano, Italy. Price, two liras; postage, one lira; or we will gladly order copies sent direct to those sending sixty cents to this office.

STUDIO ADVERTISING

"One Hundred Practical Advertisements for Photographic Studios," is the title of a series laid out for immediate use that has been prepared by Juan C. Abel, the well known editor of *Abel's Photographic Weekly.* Each one is typed and spaced by an expert, so that the best possible effect is obtained, and they are in such form that the photographer can hand them to the publisher of his local paper as required. They cover the various seasons, Christmas, Easter, and the like, and are guaranteed to attract trade. They can be used as showcase cards if copied on sheets of cardboard, preferably with colored chalk. A sample will be sent for a two-cent stamp. The pad, one hundred, costs three dollars, postpaid. Address, Abel's Publications, 917 Schofield Building, Cleveland, Ohio.

LOS ANGELES CAMERA CLUB

The Los Angeles Camera Club, at its regular meeting, held Wednesday, June seventh, elected the following officers: R. S. Crandall, President; H. C. McClung, Vice-President; T. K. Adlard, Secretary, and A. H. Lacey, Treasurer. E. R. Allen and Frank Shirley were elected members of the Board of Trustees. The Board now consists of J. B. Ward and the two gentlemen named.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

TWO IN ONE SOLUTION

Two in One is a cream colored powder that comes in a neat mailing case containing a bottle, to which last is attached two labels, one for the solution made up with water for eight ounces of intensifier and the other for twenty-four ounces of sepia toner. These two labels carry the simple directions needed for the two excellent utilities. We dissolved half the contents of the bottle in four ounces of water, stuck the directions on the bottle; dissolved the remaining half in twelve ounces and stuck on the sepia toning directions. They were then given to an amateur who delights in trying everything that comes along, and he pronounced them the best that he has used for either purpose. Being a one solution intensifier it is particularly well adapted to local reduction; and, as a sepia toner, it gives beautiful sepias without the least discoloration of the paper. It is manufactured by the Richmond Photo Supply Company, Richmond Hill, Long Island, New York. A bottle such as we have described will be sent postpaid for twenty-five cents.

A CONVENIENT SOLDERING FLUID

In a small jam-pot place half an ounce of commercial hydrochloric acid, otherwise called spirits of salts; add small scraps and cuttings of zinc. This will dissolve with evolution of bubbles of hydrogen gas. Add small zinc scraps until the acid will not dissolve any more. Thoroughly clean by filing or scraping the parts to be soldered, and then well moisten with the fluid just mentioned. This may best be applied with the aid of a bit of firewood with one end cut down to a chisel shape. To "tin" the soldering iron, heat it in the fire to dull redness, quickly give a rub with an old file, dip in the fluid in the jam-pot, and then at once rub on the solder. Instead of using the soldering fluid for "tinning" the copper "bit," it is more convenient to rub it on a piece of common salammoniac. This acts just as well, and does not cool the tip like dipping the bit in the liquid does.

RETOUCHING VARNISH

A good retouching varnish may be made by powdering up a bit of resin about the size of the kernel of a hazel nut and then putting this in a bottle with four ounces of good spirits of turpentine. The bottle and contents should be shaken every few hours for a few days, and then, any sediment allowed to settle for twenty-four hours, the clear part should be carefully decanted off. It is convenient to use the larger bottle for stock and decant off about one-half ounce at a time into a small squat-shaped bottle for use.

CHANGE OF PROGRAM

The unprecedented demand for space from the manufacturers and exhibitors at the forthcoming convention of the Photographers' Association of New England has made it necessary for the Executive Board to change its original intention of holding the convention at the Bridgeport Armory in September. The committee has selected Steeplechase Island, which offers an opportunity for holding a photographic exposition which the coming convention of the Association has actually developed into, and the board is now busily preparing plans of the Island for the inspection of the members and exhibitors. This change in plan makes it possible for the board to assure every manufacturer as much space as he requires and an absolute equality of opportunity to display his wares. The entire Island will be taken over for the purposes of the exposition and for the first time since the days of Celeron the old time Association spirit will prevail.

I am more than gratified over the showing made by the Association thus far and the assurances received by the board convince me that the coming exposition will achieve a great success and will establish a new mark in convention work. An entire building will be devoted to the display of photographs, and from absolute bookings already made, I can safely promise the

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visitors and members the greatest exhibition of photographs ever gathered in America.

Full details of the Exposition and Convention are being prepared and will be sent forward to you in due season.

J. H. GARO,
Pres. P. A. of N. E.

A HANDSOME NEW CATALOGUE

The professional photographer is always interested in the subject of mounts. Take two studios doing the same quality of work and the one that makes a practice of early displaying the new styles in mountings is the one that will have the advantage, if we may be pardoned for stating so obvious a fact. The California Card Manufacturing Company, Potrero Avenue and Mariposa Street, San Francisco, have a handsome new catalogue on the press that will be ready for distribution early in August. It will be sent to all professional photographers and dealers upon request. And just a little suggestion that may be new to some: this firm's catalogue always contains many excellent suggestions as to posing, lighting, backgrounds, and general treatment, in the examples shown. Be sure to send for one of these new catalogues.

AN ALL-AROUND NON-POISONOUS RAPID DEVELOPER

Dissolve fifteen grains of duratol in thirty-two ounces of water, and when dissolved, add one ounce of sodium sulphite crystals, two and a half ounces anhydrous soda carbonate, the sulphite and the carbonate having been previously mixed. Shake well until all is dissolved, and finally add seventy-five grains of hydroquinone. This new developer has all the advantages of the amido-phenol solutions, but is less alkaline, although equally energetic. To those who experience deleterious effects on the hands from the use of other rapid developers it is particularly recommended. Duratol developer is suitable for any class of plates and films, and develops papers absolutely fog-free, with excellent gradation. Besides being very economical in use it is one of the most stable rapid developers on the market.

FINE SEPIAS ON AZO PAPER

We have been favored with some very fine sepia prints on Azo paper; sepia that is a real sepia, the sepia of the painter, the sepia of carbon tissue; not the yellow tinged brindle that passes so often as sepia. They were produced by toning in a simple hypo alum bath, according to the formula recommended by the Eastman Kodak Company and published below:

Black-and-white prints should be made by exposing, developing, and fixing in the regular manner, using the Azo formula as follows:

Water	20 ounces
Elon or metol	7 grains
Hydrochinon	30 grains
Sulphite of soda, desiccated	110 grains
Carbonate of soda, desiccated	200 grains
Potassium bromide, saturated solution	5 drops

(Dissolve the chemicals in order named.) If crystal sodas are used, double the quantity. This solution will keep indefinitely if placed in bottles filled to the neck and tightly corked. Fix the prints in an acid hypo bath prepared according to the following formula:

Water	64 ounces
Hypo, crystal or granulated	16 ounces

Then add the following acid hardener:

Water	5 ounces
Sulphite of soda, desiccated	½ ounce
Commercial acetic acid No. 8	3 ounces
Powdered alum	1 ounce

After fixing, give prints a short rinsing and then place in a sepia toning bath prepared as follows:

Boiling water, distilled or rain	12 ounces
To which add hypo	16 ounces
When dissolved, powdered alum	4 ounces

Boil this mixture for two or three minutes. Then add twenty grains of potassium iodide which has been dissolved in one ounce of water. Next dissolve twenty grains of potassium bromide in one ounce of water and twenty grains silver nitrate in one ounce of water. Pour these two together and add the mixture to the above bath while hot, and it is ready for use after standing a few hours.

This bath when heated to a temperature of from one hundred and twenty to one hundred and thirty degrees will tone prints in from twenty to thirty minutes. Stir the bath constantly while adding the different chemicals. The white precipitate formed in the mixing of the bath may be allowed to settle and the clear solution poured off, or it may be used as it is. This bath may be used repeatedly and as many prints as can be con-

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veniently handled may be placed in the bath at one time. Prints should be stirred occasionally to insure even toning. Should any print show unevenness in the first stages of toning, no harm is done, as the toning proceeds to sepia and stops, making it impossible to over-tone. Long exposure and short development give warm tones.

These prints prove that there is nothing to be gained by using high-priced paper for sepia-toned prints; and, it might be mentioned, the hypo-alum method, our English contemporaries assure their inquiring readers from time to time, is the one universally employed by the large commercial and portrait studios over there.

AN ENTERPRISING NEW FIRM

Attention is called to the handsome full page advertisement of the Artex Photo Paper Company, on another page. We have had some most enthusiastic reports on the new paper, and our readers will do well to write them for samples and particulars. The new concern promises to turn out a paper that will justify their aggressive policy in putting it before the photographers of the country. In other words, they propose to try very hard to get you to give their product a trial, feeling that their paper will make good to your entire satisfaction and make you a regular user thereof. Write them, mentioning this notice, and samples will be sent. The address is, Artex Photo Paper Company, Columbus, Ohio.

NEWS FROM BISSELL COLLEGES

Louis Hartwell, class of 1910, has opened a modern studio at Norwich, New York. He reports business very good.

Allen Dunham, student of 1908, who recently returned for review work at the college, was married last month to Miss Grace Loy of this city. They will make their home at Meadville, Pennsylvania, where Mr. Dunham is employed.

M. Ito, of Tokyo, Japan, who has been taking a course in photography the past winter, has left for New York, whence he will sail for Buenos Ayres, Argentine, South America, where he expects to locate in a studio.

We have just received sad news of the death of John Grimes of Sandusky, Ohio, who was a student in the engraving course last winter. He was expecting to return to the college to finish his course.

H. O. BODINE GOES EAST

H. Oliver Bodine, who has been associated with the Kradwell Drug Company in the Photo Crafts Shops for the last two years, left for Rochester, New York, on or about May twentieth, to assume the position of director of publicity and trade promotion departments for the Wollensak Optical Company, of that city, one of the largest manufacturers of photographic lenses and shutters in this country.

In the past eighteen months Mr. Bodine has built up one of the most widely known mail order photo supply businesses in this country, having customers in nearly every city in the country, as well as many abroad. Mr. Bodine has been called upon in several instances to address large gatherings of men interested in the photographic business, and but recently returned from a three weeks' trip through the East and Canada, where he has many new friends in the trade. He has by his own efforts and untiring energy become in the short space of a year one of the best known men in the photographic trade today, with friends in every part of the country. His articles in the trade magazines have been highly commended, and his pictorial work is known all over this country, as well as across the water, where, at this time, he has had accepted and hung four of his photo studies in the International Exhibit of Artistic Photography, Rome, Italy.

While in our city Mr. Bodine has made a host of friends, being best known, perhaps, as the kodak expert. While these friends will be sorry to have him leave they will no doubt wish him every success in his new position which is an executive one with a larger field wherein to devote his energy and knowledge.—Racine *Daily Journal.*

"ALL WORK AND NO PLAY, ETC."

That there is little danger of Jack becoming a dull boy at the Bissell Colleges is evinced by the following notes received from the school:

The students held a May Day picnic at the Wabash River recently, and spent the day doing some skillful and artistic viewing, fishing, cooking and eating.

The Archery Club has staked out their

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distances and erected their bright colored targets under the shade trees in the south campus, and every evening sees the members busily "plugging" the white, blue, black, red and gold, and figuring up their scores.

A large number of students took advantage of the first mid-week excursion to St. Louis on May nineteenth, and visited the sights of interest in that neighboring city. The plate factories, stock houses, leading studios, and the parks, were included in the trip, making it a very busy and interesting day.

The rival baseball teams of the photographers and photo-engravers have played two exciting games since being organized, but honors are still even, each team winning one of the matches. The next game will be a hotly contested one, as the rivalry has grown very keen.

THE INFLUENCE OF CLIMATE ON AMERICAN ART

"The character and climate of a country, the particular quality of its air and light, play no small part in the destinies of its people—hence the natural interest in landscape painting. Bernard Shaw attributes the stoginess of the English and the brilliancy of the Irish to their respective climates, which is more than a whimsical thrust at the impenetrable London fogs," says J. Nilsen Laurvik in *Woman's Home Companion* for May. "An eminent modern historian has recently made out an interesting case against the intense, nerve-racking light of Greece as a prime cause of the early decadence of this race, and I have long contended that the dominant traits of American character—its delicate, high strung, nervous energy and alert restlessness—are directly traceable to the intense, penetrating brilliancy of the light here, which has a greater actinic quality than that of any other country in the world, save Greece perhaps and certain other points on the Mediterranean. The ultra-violet ray, always dominant, predominates here to an unusual degree. It may be said to be the color of America, which is gradually being revealed to us by our present-day progressive landscape painters, who are interpreting the color and character of our country with increasing truthfulness."

NEED OF A STANDARD COLOR VOCABULARY

Each season, says *Popular Mechanics,* the French dyers and colorists issue a list of colors, shades and tints to serve as a style basis, arbitrarily affixing names which in many instances bear no relation whatever to the particular hue suggested. Following in the footsteps of the dyers, other arbiters of color, lecturers, writers, manufacturers, designers, artists and artisans, who employ color in any form, have fallen into the habit of expressing color thought in terms intelligible only to themselves. This practice has grown to such an extent that today we have a color nomenclature that no living man can ever hope to master.

In chemistry, whose processes are always reducible to exact formulas, such a condition would be intolerable. The language of mathematics, in whatever tongue expressed, also conveys everywhere a uniform meaning not to be misunderstood. So with the other sciences, and in other industries no such liberties are taken as are common in the vocabulary of color.

Of course color thought is not easy of expression. For instance, not even the primaries of Chevreul—red, yellow and blue—common as they are, convey the same color thought to all. But something should and surely can be done to establish a standard vocabulary.

As it is now, there are reds and reds, blues and blues, and yellows which traverse all the tints from cream to orange. Even manufacturers of dyes and pigments that are more or less standardized differ distinctly in the quality of color value possessed by their various productions with similar titles. We hear such terms as blue-green, yellow-orange, red-orange, blue-red, red-violet—indefinite expressions of no positive value because differently interpreted by different individuals. In the decorative field today, according to the upholsterers, we have such shades as lavender, amethyst, mauve, mulberry, havane, ashes of roses, cremoise, tan, fawn, écru, café au lait, French gray, smoke gray, wood greens, wood browns, Gobelin blues, apple greens, and so on without end. And all these, in the absence of a concrete example, are

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meaningless alike to buyer and manufacturer.

For these reasons it is suggested that each trade adopt a specific system of color nomenclature, the use of which in conjunction with standard registered colors, would simplify the matter of color expression.

Possibly a condition of shade blindness is, in part at least, the cause of differences of opinion with respect to color interpretation. Perhaps there are degrees of color-perception just as positive as there are degrees of color-blindness. All of which emphasizes the need of a standardized vocabulary for each associated trade, and ultimately, perhaps, a universal standard applicable to all the arts and industries.

Here are a few of the new ones; they were taken from a department store advertisement, and one's sympathy might well be expressed for any man that would be asked to state, offhand, what some of the colors are, for instance:

Dark Brown, Rose, Ciel, Mauve, Cocoa, Copenhagen, Seal Brown, Cadet, Old Blue, Light Navy, Catawba, Putty, Prussian Blue, Oyster Grey, Lavender, Arctic Blue, Mustard, Lilac, Buff, Egyptian Soil, Chocolate, Raspberry, Bourgoyne, Hunter's Green, Moss Green, Walnut, Coffee, Biscuit, Leather, Dark Leather, Dahlia, Rosewood, Bordeaux, Delft, Gendarme, Prairie Green, Artichoke, King's Blue, Medium Delft, Helio, Habana, Golden Brown, Burnt Onion, Copper, Bronze Green, Prune, Bottle Green, Mahogany, Chicory.

SENECA HAND-BOOK FOR 1911

The progressive spirit which has always characterized the Seneca Camera Manufacturing Company, of Rochester, N. Y., can be appreciated by camera users only by a careful perusal of the pages of the Seneca Hand-Book for 1911.

In the first place, a glance at the cover of this book reveals the fact that the Seneca people value very highly, and justly so, their idea of always featuring the Seneca Indian Maiden. The Seneca catalog covers of the past few years have all illustrated an Indian scene in which the Seneca Maiden is prominently posed. The series is lithographed in several pleasing colors, and the entire set is very unique and distinctive.

Their 1911 Hand-Book contains seventy-six pages of matter valuable to everyone interested in photography. It is rightfully called a Text Book-Catalog, for it gives a

comprehensive description of the newest and most improved photographic apparatus, furnishes helps for the amateur, and technical news for the professional. It explains how to buy the right apparatus and how to use it to make photography pay.

Every reader may have a copy sent to him free if he will but write to the Seneca Camera Manufacturing Company, Rochester, New York.

DISSOLVING CHEMICALS QUICKLY

When making up developers in which a large quantity of sodium sulphite or carbonate is required, much time may be saved by dissolving the salts in the following way: Measure out the necessary quantity of water, and put it into a clean jar or wide-mouthed bottle. Then, having weighed out the crystals, etc., wrap them up in a piece of muslin and suspend this so that it just rests on, or a little under, the surface of the water. The water instantly dissolves the salts in contact with it, and forms a heavy solution which sinks downwards, and thus more salts come into contact mechanically as soon as any are dissolved. In this way large quantities of sulphite or carbonate, etc., can be very rapidly dissolved.

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Quality,
Certainty of Results,
Ease of Manipulation.

Aristo Gold Paper and Post Cards

make prints of carbon quality in sepia or purple tone. Just print, wash and fix.

American Aristotype Division,
EASTMAN KODAK CO.,
JAMESTOWN, N. Y.

All dealers.

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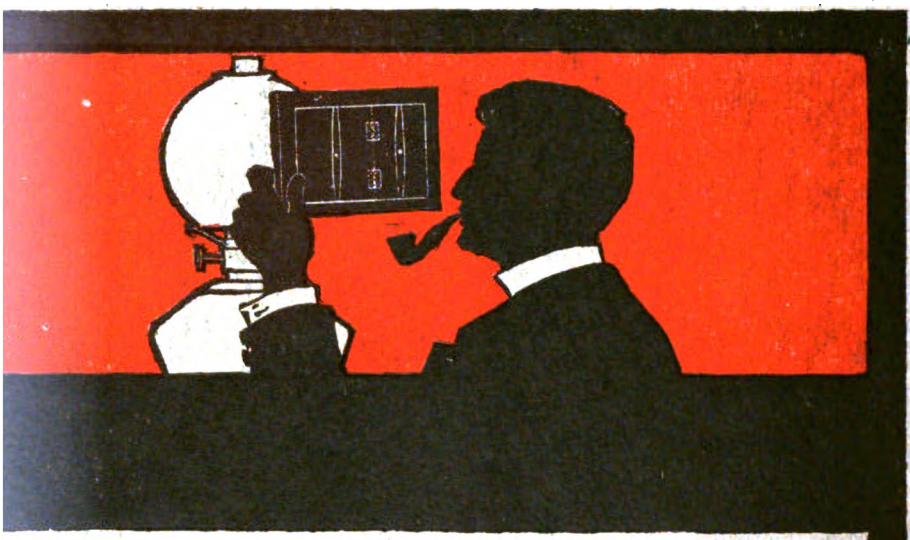

If it's in the negative, you get it in the Velox print.

Ask for the Velox Booklet.

Nepera Division,
EASTMAN KODAK CO.
ROCHESTER, N. Y.

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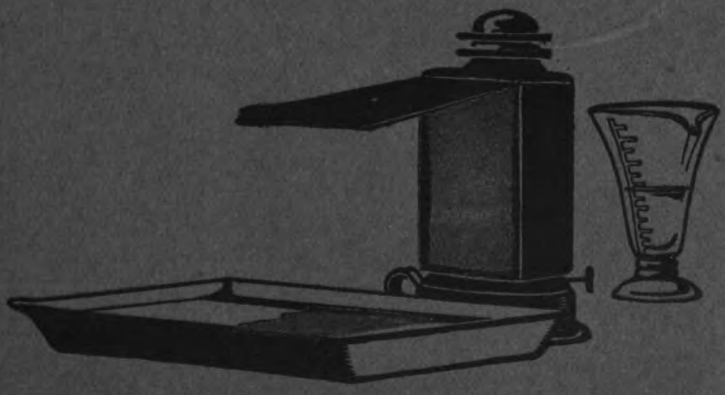
Vol. XVIII No. 8 AUGUST, 1911 Price, 10 Ce

Camera Craft



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SAN FRANCISCO, CALIFORNIA

An arbitrary statement claimed as a fact, but unsupported by proofs or reasons, has ever been resented by the people as an offense to their intelligence.—FRA MONTE.

CYKO proved its quality first by a long and steady record of success in the hands of the leading photographers of the country.

CYKO users then submitted the printed evidence at National and State Conventions that has made CYKO famous.

A single proof is worth a page of unsupported claims

Ansco Company Binghamton, N. Y.

Please Mention Camera Craft when Corresponding with Advertisers.

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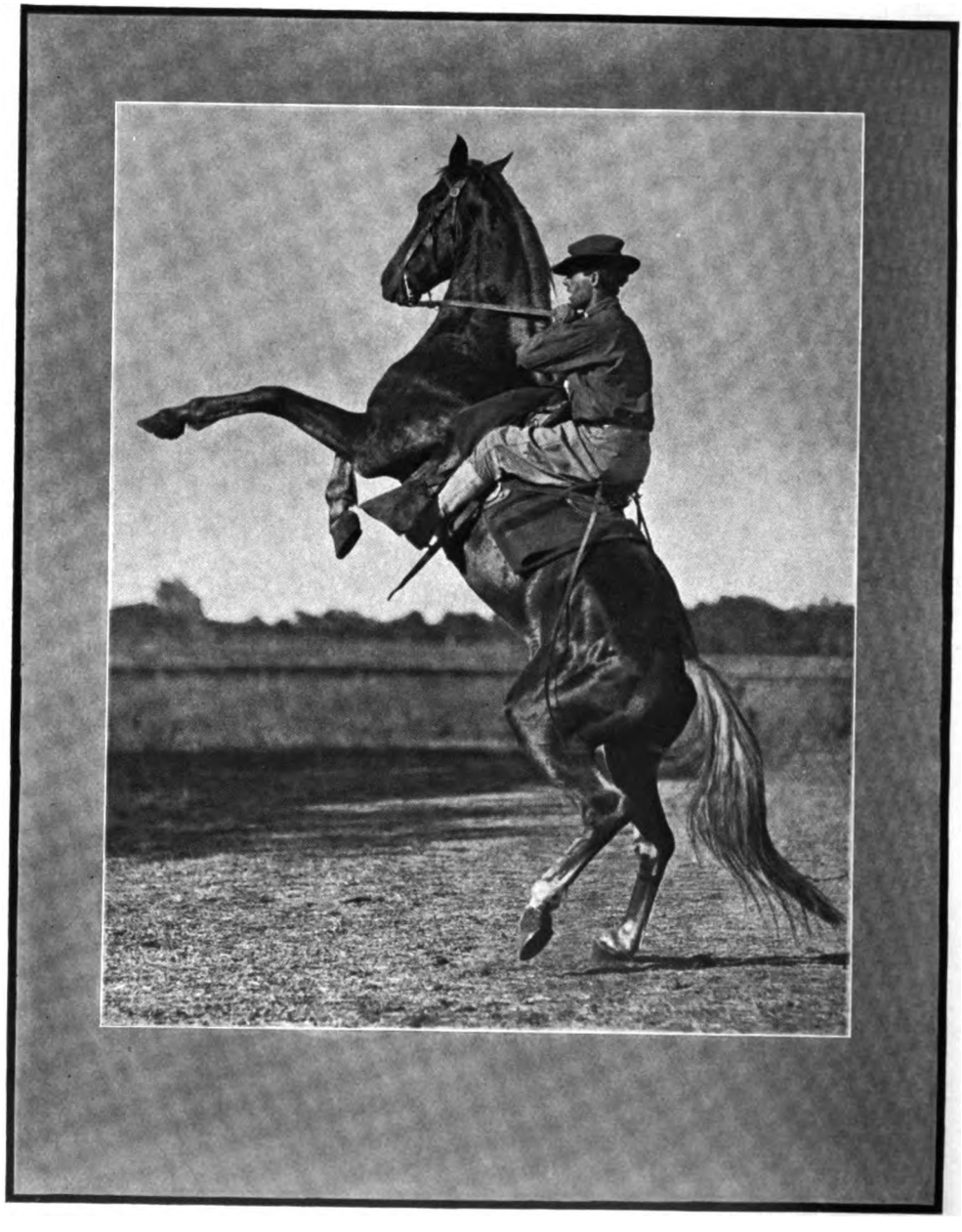

A SPIRITED STEED
By R. A. KNOWLES

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII AUGUST, 1911 No. 8

My Methods In High-Speed Photography

By R. A. Knowles

✷

Illustrated by the Author

Remembering, and how well I do remember, the time when I first contemplated doing high-speed work and searched in vain for some helpful hints on the subject, I am constrained to offer the readers of CAMERA CRAFT a few leaves from my own experience since that time. There may be others with their minds set on making some high-speed pictures, and to any such I believe

EXPOSURE: ONE NINE-HUNDREDTH SECOND, STOP F-4.5.

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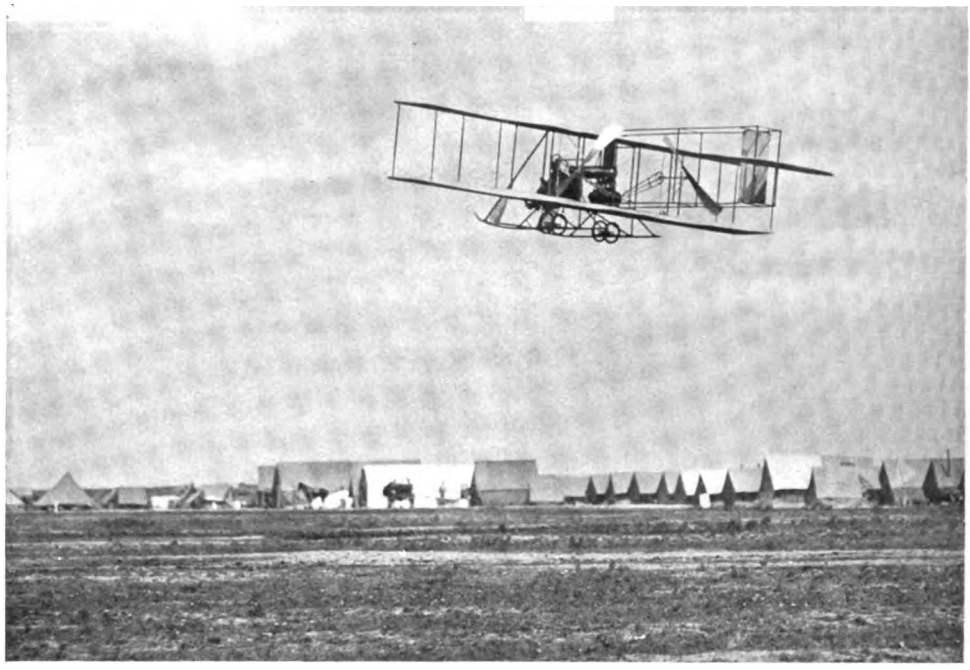

EXPOSURE: ONE FIVE-HUNDREDTH SECOND, STOP F-6.3.

I can offer a few suggestions that will be helpful. I know such would have been most helpful to me at a certain stage of my work. And before starting upon a description of my methods, I would like to explain that I will mention the particular camera, lens, plate, and the like that I use, not with a desire to dogmatize and say they are the only ones to be used, or even to say that they are the best. All I wish to do is to explain just how I work, what I use, and show a few results. The tools that I am using are the ones that have given the best results in my hands, as compared with the others, not all the others, that I have tried.

Seeking for advice, a friend advised a Graflex camera as the proper thing, so I bought a 5x7 without a lens, thinking to use a twelve-inch anastigmat working at f-6.8, which I had. I used this for a time without much success; in fact, I was disgusted with my results and blamed my tools, as most poor workmen do. About that time I woke up to the fact that there were much faster lenses than my f-6.8 one, that a faster one was what I wanted, and later that such was certainly the case. Making inquiries from photographers who had used different fast lenses and studying over all the catalogues, I decided in favor of a Bausch & Lomb-Zeiss Tessar 1C, working at f-4.5, bought it, and have since found it ideal for the work. I would advise any one about to buy a lens for speed work, and expecting to use only one lens, to get one of from eight and three-fourths to ten inches focus, for 5x7 work. Such a lens has many advantages over one of shorter focus for all-around work. I use one of nine and three-fourths inches focus, a 6½x8½ lens, according to the catalogue, for my 5x7, and I have never found any need of two or three different focal lengths, as is so often recommended.

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EXPOSURE: ONE SEVEN-HUNDREDTH SECOND, STOP F-4.5.

The next thing to consider is the plate. Do not think that because you have a fast lens and shutter any old plate will give good results. I found many good plates and some poor ones, but the "Comet," made by the Central Dry Plate Company, I consider the ideal plate for high-speed work. Another important matter is the developer. I cannot recommend the tank system of devel-

EXPOSURE: ONE SEVEN-HUNDREDTH SECOND, STOP F-6.3.

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oping too highly. I never succeeded in getting results worth while in high-speed work until I adopted the tank method. I have frequently heard photographers say: "I like to see what I am doing when I develop my plates," but I can see no advantage in staying in a close, hot dark-room and worrying over a batch of plates when one can sit down and take it easy for twenty minutes, and have the tank do the work. If the latent image is on the plate, the tank will do the rest. Looking at a plate during development never brought out any detail, but many a good negative has been fogged and spoiled by using too strong a developer and trying to force out an image. So doing only produces chemical fog. Plates that have been under-timed must be developed in a weak developer in order to give the detail in the shadows sufficient time to come up.

As a tank developer for high-speed work, I would recommend the use of three stock solutions, as follows:

Carbonate of soda solution to test 30.

Sulphite of soda solution to test 70.

One ounce of pyro in sixteen ounces of water, to which is added twelve grains of oxalic acid.

To develop, take sixty ounces of water and add two ounces of each of the three above stock solutions. Develop for twenty minutes at a temperature of about sixty-five degrees Fahrenheit.

As to the light, a good light is, of course, demanded for high-speed work, but I find a low, strong light the best. When the sun is high, the light is stronger, but the light coming almost straight down makes the legs of horses coming towards the camera in shadow and the effect is not good. Avoid heavy shadows by taking advantage of the light whenever it is possible to select a position. And one other piece of advice, do not fall into the beginner's error of working too fast. There is practically no danger of over-exposing your plate and it is easy to get too little time thereon. You will, if you have the same ideas as the average beginner at speed work, be surprised at the length of exposure you really can give moving objects. The exact shutter speed can hardly be laid down for all kinds of subjects, because the conditions are so varying. Angle at which they are moving, distance from the camera, and actual speed of the most rapidly moving part of the object, all enter into the calculation. The best teacher is experience. When you are making a certain kind of subject, try a few plates with a little slower speed than you think necessary. The results may show you that you can use the slower speed when you come to photograph the same subject again. Even should it not, you will have learned just where the line is to be drawn between a too slow and a suitable shutter speed.

In taking fast-moving objects, if you have the time, pick out some object about where you want to catch your object, get a focus on it, and then wait for your subject. Oftentimes, in taking, say, a trotting horse coming towards one, it is possible to turn to another horse at the proper distance to give the right sized image, secure the focus, and then turn again to the track, and when the image of the desired animal is the proper size, it will be in sharp focus

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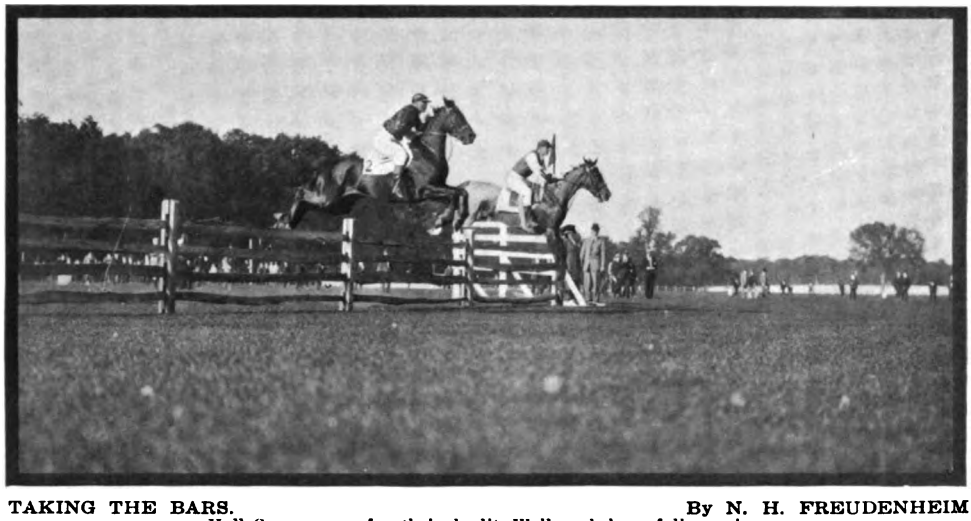

TAKING THE BARS. By N. H. FREUDENHEIM
Hall Camera, one-fourth inch slit, Wollensak lens, full opening.

and the exposure can be made. Do not try to follow a fast-moving object with the focusing. You will find it gets too close or out of range before the shutter can be snapped. Point your camera at an object coming directly towards you and watch the image. It will be seen small, gradually growing larger, gaining speed all the time, until, at about the point where it nicely fills the plate, it seems to burst into enormous proportions. That is because the increase in size of image is in inverse proportion to the square of the distance. And it is this geometrical increase in the size of the image that makes it practically impossible to both focus and make the exposure at exactly the right moment, although long and constant practice may enable some workers to anticipate a little in the matter of focus and so, apparently, focus as the object approaches.

And the worker need not worry about subjects for his high-speed pictures. Baseball, horse races, steeplechasing, aeroplanes, polo games, and I could name many others. Anything that shows good action makes a good subject. I think high-speed work is one of the most interesting branches of photography. The resultant pictures are always so interesting with their life and action, their natural poses, effects that could be secured in no other way.

Choice in color corresponds to the degree of sensitiveness and education possessed by the eye. The barbarian and the infant seize only the most striking notes in the color-gamut. But as age, training, or civilization advances, the individual appreciates the semi-tones, the quarter-tones, perhaps even the finer divisions of the chromatic scale.—THE CRAFTSMAN.

Art deals with things forever incapable of definition, and that belong to Love, Beauty, Joy, and Worship, the Shapes, Powers, and Glory of which are ever building, unbuilding, and rebuilding in each man's soul, and in the soul of the whole world.—PLOTINUS.

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Post Card Passe-Partouts

By Roy J. Sawyer

The owner of a 5x7 camera in course of time accumulates a lot of negatives, amongst which there are many of no value on account of mistakes in exposure, lighting, etc., and a practical use can be made of these instead of relegating them to the ash-heap.

A short time ago I looked over my stock of negatives carefully, and weeded out those of no particular value, *i. e.*, those that were more or less pronounced failures, of which I had the usual allotment of an enthusiastic amateur. My first thought was to destroy them; but, thinking that at some future time I might make use of the glass, I cleaned off the emulsion and placed them aside, with the idea of using them whenever opportunity presented.

Noting the passe-partouts in the various art stores, I conceived the idea of using up my stock of glass in making some species of this particular kind of picture. Some of the passe-partouts, I observed, were framed close, while others showed a margin of cardboard surrounding the picture. This latter way appeared to me as being the best, as the picture, when attractively mounted on cardboard in harmony with it, showed to better advantage than when framed up close. Upon further experimenting, I found that a post card, when mounted on a card exactly 5x7, left a border of three-fourths of an inch around it, as the post card, is 3½x5½ inches. I have reference to Cyko post cards, which were the ones I used, but possibly other cards would measure about the same.

As I intend this article for the enlightenment of my readers on this subject, I will give them the benefit of my experience. First of all, the negatives must be perfectly clean of the emulsion on their surfaces. Place whatever quantity is desired in an old pail, on their edges, separating them at top and bottom with bits of wood. Pieces of matches will answer for this purpose. Next, make a strong solution of washing soda in very hot water, and pour this over the negatives until they are completely covered. Set the pail aside for about ten or twelve hours, and it will be found that most or all of the film has left the glass. Any remaining film can be removed with an old nail or tooth brush. Rinse thoroughly in cold water and dry with a soft cloth; and, when perfectly dry, polish the glasses with an old newspaper.

The post cards should be dried perfectly flat, doing this by sponging the backs with a damp sponge or cloth and placing them between blotters under weight for a couple of hours. After they are dry, a neat white border should be filed on their edges with the aid of a small, flat file, or a border can be printed on them in the first place. The back of the passe-partout frame should be cut exactly 5x7, and before binding is attempted, the back of the cardboard should be ruled with four perfectly straight lines, about half an inch from each edge.

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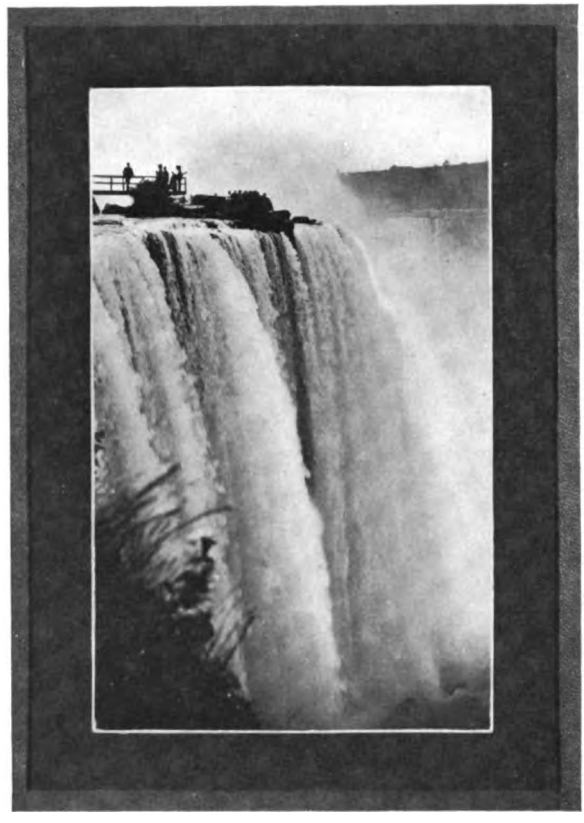
depending on the thickness of the cardboard. The cardboard I use is of medium ply, and I draw the lines one-half inch from the edge. This procedure is a necessity, as it serves as a guide for the binding. It must be understood that the post card is to be mounted on a piece of cardboard separate from the piece used for the back, the reason for which will be explained presently. In order to see just how far to draw the guide lines, a piece of the passe-partout binding should be used to measure with. Cut off about an inch of the binding, and fold it over the edge of the glass and back placed together. It can be then ascertained just how far from the edge to draw the guide lines. The post card I mount on very thin cardboard by placing a little paste along the top and bottom edges, or, in case of a horizontal view, on each side. Just a little paste should be used and the mounted post card placed under weight to dry. Before the glass and back are put together, the hanger should be fastened in the back. The kind of hanger made of brass should be used, with a small ring supporting a clip. These sell for ten cents a dozen in most any art store, and are much superior to the kind that are made of cloth and fastened on the outside of the frame. The brass hanger is not only neater than the other, but, the most important point, it is safer, there being no danger of it letting the frame drop when on the wall, as the cloth one often does. Measure three-fourths of an inch from the top of the back, and at an equal distance from each side place a dot. This is essential to get the hanger in the center so that the frame will hang straight when on the wall. Make a small slit with the point of a knife on the dot and insert the hanger, bending in opposite directions the two prongs and pressing them down firmly.



NIAGARA FALLS By ROY J. SAWYER

The frame is now ready to be put together. Have the glass perfectly clean, as any finger marks on it will show. Moisten the strips of binding with a wet sponge; and, by placing one edge on the guide lines and bringing the other over carefully on the glass, they will be in accurate position. Sometimes the glass will vary in thickness, one edge being a trifle thicker than the other, and this

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must be taken into account. But a few trials will enable one to get the binding true and even. The sides should be bound first, then the bottom, and then the mount containing the post card should be trimmed so that it can be inserted in the top. I have found this method superior, as the card can be easily and accurately centered. After the card is centered, the top strip can be placed on, completing it. The mount containing the post card should be trimmed just enough to enable it to slide into place without much forcing; as, if it is trimmed too much, the card will have a tendency to shift with every vibration.

If a sepia effect is desired, the cards should be redeveloped and mounted upon cardboard of a color in harmony with the tone of the print. The binding should also be of brown tone, to correspond with the mount. The color scheme can be varied by using velvet green cards, and by using green mounts and binding. Even blue-print post cards lend themselves to this method of framing, as very striking effects can be had by using moonlight or seascape subjects. The subjects to be framed should be of interest or beauty, as commonplace ones will not attract any attention and are not worthy of the time and labor involved. Since I started making these frames, I have sold several dozen and have many more orders, as, being dainty and original, they appeal to nearly all that see them.

"All passes—art alone
Enduring lasts to us;
The bust outlives the throne;
The coin, Tiberius."

A TRYING INTERIOR WELL HANDLED By HAROLD HALL

Illustrating Article on Next Page

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Preventing Halation By Development

By Harold Hall

Illustrated by the Author

Now, gentle readers, pray be calm. This, my friends, is not another tribute to the glorious triumph of the Great King Tank. Far from it. To you who expect another elaborate vindication of the merits of the mighty tank, here's for a frank admission that of any one method, the tank probably gives the best average results from all exposures. But, that again, for even the mighty tank is not omnipotent, and my allotted topic concerns halation, and more important, the prevention of it.

To begin, I would suggest that you refreshen your memory with some of those negatives you exposed toward a strong light. In development, you perhaps sought to force out detail in the shadows by prolonged immersion in dilute developer. So much the worse if you under-exposed with the object of minimizing the strong highlights. But, if you rocked the tray (or tipped the tank) for a long time in hope of building up shadow detail, the chances are that you will remember the delicate shadow detail did not materialize in proportion to the strong highlights which you sought to control. But, "Why?" you ask.

Now, there are, in general, four methods of preventing halation. First, where possible, by reducing undue contrasts of light and shade in the subject. This method is frequently impracticable, notably in the case of interiors and subjects under artificial illumination. Second, by using backed plates in order to minimize reflections from the rear surface of the plate. This method is inefficient, chiefly owing to imperfect optical contact of backing with negative base; and, moreover, owing to the fact that a certain amount of light is reflected from the glass (or celluloid) surface itself. And this, not to mention the practical inconveniences of the method. Third, by using a sensitized medium in which most of the actinic rays are absorbed before reaching the back. For example, the non-halation, double-coated, orthochromatic plate, on which a very full exposure is obtained on the fast, outer emulsion, before enough light has penetrated the underlying, slow emulsion to make itself evident by reflection, that is, to cause halation. Or again, there is that class of sensitive mediums with a red or brown dye beneath the sensitive emulsion. This dye absorbs most of the actinic rays before they can reach the reflecting surface of the film base. Examples of this class are Eastman Speed Film and the Lumiere Non-halation plates, in which the reddish dye is discharged by an acid fixing bath. All of these are quite satisfactory, when properly used, especially the latter, to my mind. But, with improper development, double-coated plates come far from being non-halation, and even the non-actinic dye cannot make up for loss of gradation in a contrasty subject. There then remains, aside from

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doctoring, the fourth general non-halation method of development. Under this category come undisturbed development in horizontal tank; development with minimum of accelerator or alkali, for weak density; local development, etc., etc. But, strictly for non-halation, the principle of short development seems to me unexcelled.

The picture at the top of this page is an example of normal exposure and long development. I think a good many of my readers will recognize it as typical of many prints they have seen, perhaps produced themselves. The details concerning the exposure are as follows: Cramer's single-coated Isochromatic plate; exposed towards north and east windows; June, bright light outdoors; stop f-11; thirty seconds' exposure. Developed for five minutes in metol-hydroquinone developer made up according to "Standard" formula and diluted as advised for plates. Print on Special Velox, exposed five minutes at six inches from two sixty-watt tungsten incandescent electric lights.

We know that halation results from light that has penetrated the emulsion and been diffused, after reflection from the back, necessarily, of the emulsion, since perceptible diffusion of the image is impossible within the thickness of the ordinary sensitive film. Therefore, if we can develop an image without the effects of this reflected and diffused light from the back, we can eliminate halation. And this means surface development. Moreover, surface development is possible only by short immersion in the developing solution. The developer ordinarily penetrates the sensitized film within one minute. Therefore, to obtain proper density on surface of emulsion, developer must be used strong enough to act within this time. This, in brief, constitutes the entire technique of non-halation by concentrated developer. The essential point is

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this: Stop development immediately when development penetrates sensitized emulsion, and before density is built up from back.

The other picture of the same subject was taken under the same conditions as to plate, light and stop, but two minutes' exposure was given. It was developed in the same developer, except that the stock solution was used undiluted and development allowed to continue for only forty seconds. The print was made on the same paper exposed at the same distance from the same light, but an exposure of less than a second was required. The developer was exactly the same as that used on the other print.

Using quite strong developer, with sufficient alkali, there should be no difficulty in obtaining good printing density within the very brief time required for the emulsion to become charged with solution. Even should the density seem insufficient when the image appears on the back of the plate or film, judging by reflected light, nevertheless, the plate should be removed from the developer at once; for, from that time on, highlights and any traces of halation will develop out of all proportion to the increase of density. A thin negative, without halation, can easily and satisfactorily be intensified later on, but only those who have tried it know the joys of removing halation, once it has developed.

The other two reproductions herewith are from straight, undoctored prints, made on Special Velox for softness. They are not submitted as brilliant examples of perfection in art and technique, but merely to show the possibilities of this method, which I have endeavored to explain. The first negative was made in March, toward south windows, about 8:30 a. m.; bright light outdoors; stop f-16; five minutes' exposure. Second illustration, negative exposed toward

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HALATION MINIMIZED BY METHOD OF DEVELOPMENT

west and north windows, between 8 and 9 a. m., in March; bright light outdoors; stop f-16; eight minutes' exposure. Both negatives were made on Standard Polychrome plates and developed in a tray for about forty-five seconds, at seventy degrees Fahrenheit; metol-hydroquinone developer, mixed according to formula accompanying Eastman sodas. Strength, seven ounces stock solution with water to make sixteen ounces altogether, no bromide; no intensification; no reduction and no fussing.

But try it yourself; only remember, for non-halation, full exposure and short development.

Perfection

To keep in sight Perfection, and adore
The vision, is the artist's best delight;
His bitterest pang, that he can ne'er do more
Than keep her long'd-for loveliness in sight.

WILLIAM WATSON.

Nothing makes the soul so pure, so religious, as the endeavor to create something perfect; for God is perfection, and whoever strives for it, strives for something that is Godlike. True painting is only an image of God's perfection, —a shadow of the pencil with which He paints, a melody, a striving after harmony.—MICHAEL ANGELO.

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The Krayn Color Screen Film Process

By H. E. Blackburn

Although following the Autochrome and other screen-plate processes, a color film that promises many advantages over the glass plate has been placed on the market by the Neue Photographische Gesellschaft, of Berlin, Germany. In its manufacture, sheet celluloid, such as is used for ordinary roll film, is coated with gelatine and upon that is printed a series of lines in oily ink. The gelatine spaces intervening are dyed up in a red bath that takes to the gelatine only between the ink lines, forming red lines, and these lines in red are fixed so that the subsequent colors will not mix with them by subjecting the red-dyed film to a bath of ferric chloride. After drying, the lines in fatty ink are removed with a benzole swab. This red-line screen is next given a second series of lines in fatty ink, spaced exactly like the first, but ruled at right angles to the first. The film is again stained in a dye bath, this time blue, and as before, fixed, the fatty ink lines removed and the film dried. The third, or green, dye bath is allowed to stain up the spaces left by the removal of the last series of oily ink lines, and when dry, the film is ready for a panchromatic emulsion. This applied, in the usual manner, the film is ready for use in a film pack or, if desired, in an ordinary plate holder. The exposure, as in the Autochrome and like processes, is made through the film or from the back, with a proper filter, in the form of a glass filter kit, just in front of the film. In other words, the image-forming rays pass, after leaving the lens, first through the filter kit, then through the celluloid film, next through the ruled colored layer of gelatine, reaching the panchromatic emulsion last.

The exposed film is developed and fixed in the ordinary way; and, when dry, can be printed upon another film having the same ruling in colors, but coated with a positive emulsion instead of the panchromatic one. Upon development of this positive, the colors all appear by transmitted light as in other screen-plate processes, but, in this process, any number of positives in colors can be produced from the original negative, and positives on paper are made possible, as will be explained further along in the working directions.

Upon opening a package of the Krayn Color Films, in the dark, of course, one corner will be found cut off in order to locate the screen side of the film. This corner must be placed in the glass filter kit so as to come against the cut corner of the filter. The kit and film are then placed in the holder and it is ready for exposure. The focusing screen must be reversed in the camera back in order to bring its ground surface in the same plane as the film, making allowance in that way for the thickness of the glass kit.

The exposure should be fifty times that given an ordinary plate, without filter, under the same conditions. Sunshine and subjects containing strong contrasts of color or of black and white, should be avoided. One should try

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to gauge the exposure for the half-shades, not the shadows. The exposed films are developed in the dark, using a soft working developer. After two minutes' immersion, one can turn up the red light. Development should not take over three minutes or a liability to fog will be found. If results are not satisfactory, no attempt to doctor, intensify, or reduce should be made. Another exposure should be tried. Fixing is done in an ordinary acid hypo bath, followed by washing and finally a five per cent glycerine bath before hanging up to dry.

To make the positive, this negative film and the unexposed positive film are placed in the yellow filter-holder kit so that all three cut corners come together, and exposed as for a contact lantern slide, through the yellow filter. Develop, fix and wash the same as the first or negative film, following with the glycerine bath. The result will be a beautiful transparency in colors.

To obtain prints upon paper, from these positives, it is only necessary to fix out six ordinary unexposed dry plates in a twenty per cent hypo bath, using no hardener, wash them well, and then dye up two in each of the following baths:

Hoechst No. 1 Filter Red..... 1 gramme
Hot water .....100 cubic centimeters

When cool, filter, and immerse plates three hours.

Hoechst No. 1 Filter Green.....
Hot water.....100 cubic centimeters

When cool, filter, and immerse plates two hours.

Crystal violet ..... 9 grammes
Acetic acid ..... 1 cubic centimeter
Water . . ..100 cubic centimeters

Filter, and immerse plates one-half hour. The colors may be obtained of Victor Koech & Company, 122 Hudson Street, New York.

These plates are to be used as filters to obtain three color-selecting negatives from the screen film positive. From the dye baths the plates are drained, dried, and then bound up in pairs with ordinary binding tape. The red filter, the two red-stained plates bound together, is placed in a printing frame, then the screen film positive, and lastly, in the dark, an unexposed panchromatic plate. Exposure is made to a lamp, the plate developed in the dark, using a soft working developer, fixed and washed, and then marked red negative plate. The same is done with the green filter and film, using an orthochromatic plate, developing as for orthochromatic plates, and marked green negative plate. With the blue filter and film, an ordinary plate is used, developed accordingly, and marked blue negative plate. This gives a set of trichromatic negatives suitable for prints on paper.

To those who are familiar with the double transfer carbon process, the trichrome tissue supplied by the Neue Photographische Gesellschaft, Berlin, Germany, will appeal strongly. The proper colors are used; they are very transparent, and of the most lasting quality. In addition, the difficulties have been greatly minimized by the introduction of a spirit sensitizer and a stripping solution. All the former troubles of securing good adhesion and register have been removed. The only precaution necessary is to buy the tissue in

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rolls and cut it oneself so that each sheet is the same way of the paper. So doing, the expansion and contraction of the support during manipulation will be the same in all three and no difficulty will be experienced in securing absolutely perfect registration when they are superimposed. In the old method there was great difficulty in securing good adhesion, but talced plates and stripping solution now take the place of the tricky gelatine or collodion solutions.

Personally, I work the process as follows: Ten ounces of clean, selected crystals of bichromate of potassium are placed in a stone jug containing two hundred ounces of hot water. This makes a five per cent stock solution that keeps well. To eight ounces of this stock solution are added two ounces of water, two ounces of acetone, and then, while stirring slowly add enough liquid ammonia to just turn the orange color yellow. This is a rather weak sensitizer, but the negatives are thin. Filter, and it is ready for sensitizing the tissue. The tissue has been cut as advised, a tray of the proper size contains the bath, and good lamplight is being used, the tissue not being sensitive until dry. A sheet of the yellow tissue is placed in the solution and turned over and over to see that no bubbles collect on its surface. When it becomes limp and starts to curl in the opposite direction, it is taken out and squeegeed onto a sheet of ferrotype plate, and set in the dark to dry. If there is a good circulation of dry air, it will strip and be ready to print in about two hours. In my own practice, I darken the room and use the attic stairway, there being a good draught there.

This sensitized yellow tissue is printed under the blue filter negative until it shows a good image, then transferred to a pan of cool water and proceeded with as ordinarily. It is kept turning until limp, and when it starts to curl in the opposite direction, it is removed and placed, coated side downward, on one of the dry, talced ground-glasses. As the adhesion is a matter of vacuum only, no time need be allowed, and it is placed at once in a tray of water as warm as the hand can bear. As soon as the color starts to ooze out around the edges, the paper support is gently peeled free from the glass. Rubbing or pouring water on the print in order to bring out unexposed parts must not be resorted to or gradation will be destroyed. Rocking the tray only is permissible. When no more color will come away, the print on the glass plate is rinsed and set up to dry.

The desired number of yellow prints being made, a bath is made up by adding a grain of fluoride of soda to each ounce of water, and in this is placed a sheet of heavy single transfer paper. When the gelatine-coated surface becomes slimy, it is ready to be placed upon the yellow print and squeegeed into contact. The yellow print has, in the meanwhile, been given a bath of six drops of sulphuric acid to the ounce of water, a strength that will have no ill effect on either the print or the hands. When dry, one corner is raised with the point of a knife blade and the paper stripped from the ground-glass support. If the glass was properly talced, the print will be found adhering perfectly to the paper.

The desired number of sheets are next cut from the red roll, seeing, as

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in the case of the yellow tissue, that all are cut in the same direction, printed under the green negative plate, and proceeded with in the same way as for the yellow print, except that the yellow print itself on the paper support is placed in the fluoride bath until slimy, when it is placed in register on the acid-bathed red print, squeegeed, dried, and stripped. The making of the blue prints follows the same procedure. In all three, owing to the transparency of the tissue, depth of printing can be judged by examining the visible image as printing proceeds. Stripping the blue print completes the process except for a good washing, after which the print is ready for mounting.

As the reader has no doubt observed, this description of the process of producing finished trichromatic prints does not, in any way, suggest complexity or difficulties not easily overcome. Taking it all in all, it seems an ideal process for the production of color prints on paper from screen-plate or screen-film negatives.

All great art is delicate art, and all coarse art is bad art. Nay, even to a certain extent, all bold art is bad art; for boldness is not the proper word to apply to the courage and swiftness of a great master, based on knowledge, and coupled with fear and love.—JOHN RUSKIN.

Nature is the art of God.—SIR THOMAS BROWNE.

INDIANA
CONVENTION
EXHIBIT

CADY
Booneville, Ind.

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The Sixteenth Indiana Convention

By J. Bourgholtzer

Incorporating Secretary Shalley's Report

The Sixteenth Annual Convention of the Indiana Association of Photographers was held at Winona Lake, July tenth to thirteenth. The first day was spent in the arrangement of exhibits, which was followed in the evening by an informal reception.

The first business session was called to order on the morning of July eleventh, by the President, Mr. Bourgholtzer. After music by the orchestra, the President's address was given, which was followed by the reports from the Secretary and Treasurer. After reading communications from absent members, the President announced the committees. The remainder of the morning was given over to demonstrations under the skylight by Mr. Sykes, of Chicago.

INDIANA CONVENTION EXHIBIT
By BEN LARRIMER
Marion, Ind.

In the afternoon, the program consisted of paper demonstrations, demonstrations under the skylight by W. H. Towles, of Washington, D. C., a most interesting demonstration of the working in of backgrounds by Mrs. M. Sykes, of Chicago, and a general review and criticism of exhibits by those

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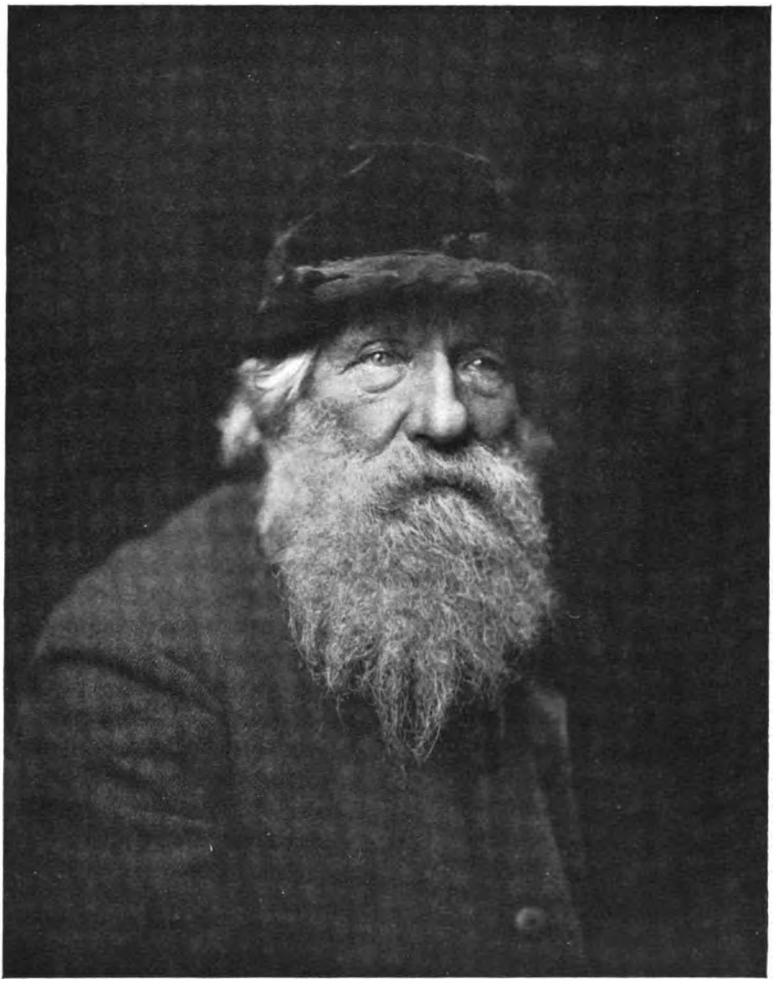

INDIANA
CONVENTION
EXHIBIT

PERRY
Fort Wayne, Ind.

present. Messrs. Graham, Holloway and Larrimer occupied the evening with demonstrations in bromide enlarging.

On the morning of July twelfth, after a business session, George W. Harris, of Washington, D. C., President of the National Association, gave an interesting and comprehensive talk upon "System in the Studio," illustrated by charts showing the entire course of business in a large studio.

In the afternoon, Mr. and Mrs. Sykes continued their demonstrations, and James H. Smith, of Chicago, gave some flash-light demonstrations, which were very interesting.

Juan C. Abel, of Cleveland, Ohio, was on the program for an illustrated lecture on "Studio Advertising," but was unable to be present. Mr. Smith gave some further demonstrations of flash-light work, and the enlargement demonstrations were continued by Messrs. Graham, Holloway and Larrimer.

Upon Thursday morning, after a short business session, addresses were made by Charles Lewis, of Toledo, and Dudley Hoyt. The Convention then

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INDIANA CONVENTION EXHIBIT

PARROTT
Fort Wayne, Ind.

proceeded to the election of officers, which resulted as follows: President, Elmer Shores, Vincennes; First Vice-President, Charles Hichert, New Castle; Second Vice-President, S. A. Hockett, Fairmount; Secretary, Fred Benton, Oakland City; Treasurer, E. F. Perry, Fort Wayne, and Trustee of Daguerre Memorial Institute, George Parrott, Fort Wayne. Winona Lake was selected as the next place of meeting.

The diamond medal was awarded to M. Sykes, of Chicago, for his picture

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entitled "Chord." This contest was open to photographers all over the world, except residents of Indiana.

Billy Sunday favored those in attendance with one of his most brilliant efforts, the talk given by him being one of the features of the Convention. Mr. Griffin, of Wheeling, West Virginia; Mr. Nelson, President of the Nebraska Association; Mr. Cole, of Virginia; Mr. and Mrs. Bernard, of Lincoln, Illinois; Towles, of Washington; Lewis, of Toledo, and Dudley Hoyt, of New York, were some of the notable visitors from outside the State.

INDIANA CONVENTION EXHIBIT
By J. BOURGHOLTZER Washington, Ind.

Mr. Sykes' picture winning the diamond medal was one of three, the titles being: "Vibration," "Chord," and "La Symphony," all being most effective in both conception and technique. The demonstrations were all most interesting and instructive, particularly that by Mrs. Sykes on the working in of backgrounds and those by the veteran flashlight worker, James H. Smith, of Chicago.

All in all, the Convention was the best ever given by the Indiana Association. The attendance was larger, the exhibits were more numerous and of a higher order, and the demonstrations were more varied and interesting than at past conventions. The displays by the manufacturers and dealers were such that they competed strongly with the other attractions.

The Fort Wayne delegation, in securing the Convention for their city next year, promised to give the members an even better Convention than the one just held. The new officers are all men with the interest of the Association at heart, and our next meeting will, beyond doubt, prove that the Indiana Association can be depended upon to improve with each recurring Convention.

The world of art is an ideal world,—
The world I love, and that I fain would live in;
So speak to me of artists and of art.

LONGFELLOW.

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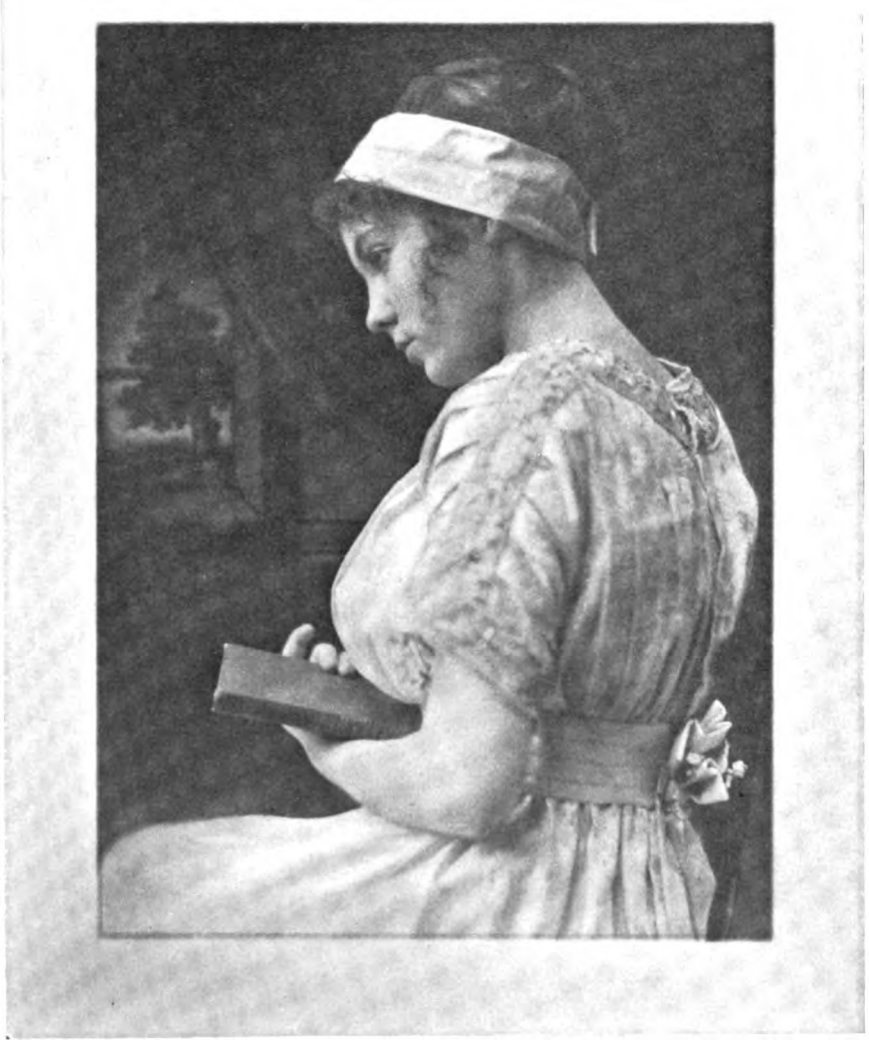

INDIANA CONVENTION EXHIBIT — By HOLLOWAY, Terre Haute, Ind.

Truth Not The Artist's Aim

Conceiving as I do that the first object of an artist is to gratify the feelings of taste, or the proper aesthetic emotions, I cannot assent to the current maxim that nature is his standard, or truth his chief end. On the contrary, I believe that these are precisely the conditions of the scientific man; he it is that should never deviate from nature, and who should care for truth before all

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other things. The artist's standard is feeling, his end is refined pleasure; he goes to nature and selects what chimes in with his feelings of artistic effect, and passes by the rest. He is not even bound to adhere to nature in her very choicest displays; his own taste being the touchstone, he alters the originals at his will. The scientific man, on the other hand, must embrace every fact with open arms. . . .

The amount of regard that the artist owes to truth, so far as I am able to judge, is nearly as follows: . . . The artist's feeling and the gratification of mankind generally are the sole criterion of the effect. So in the fancies of decorative art, nature has very little place; suggestions are occasionally derived from natural objects, but no one is bound to adopt more of these than good taste may allow. Nobody talks of the design of a calico as being true to nature; it is enough if it please the eye. "Art is art because it is not nature." The artist provides dainties not to be found in nature. There are, however, certain departments of art that differ considerably from music and fanciful decoration, in this respect, namely, that the basis of the composition is generally something actual, or something derived from the existing realities of nature or life. Such are painting, poetry and romance. . . .

The artist has to show a certain decent respect to our experience of reality in the management of his subject, that are not purely imaginary, like the figures of a calico, but chosen from the world of reality. . . .

In the attempt to reconcile the artistic with the true—art with nature—. . . a restraint is put upon the flights of pure imagination. . . . In painting we have natural scenery, buildings, men and animals presented with scrupulous exactness. . . . Hence the study of nature has become an element in artistic education; and the artist often speaks as if the exhibition of truth were his prime endeavor and his highest honor. It is probably this attempt to subject imagination to the conditions of truth and reality that has caused the singular transference above mentioned, whereby the definition of science has been made the definition of art.

* * * * * * * * * * * *

"We ought not to look to an artist to guide us to truth; it is enough for him that he do not misguide us."—Alexander Bain, in "The Senses and the Intellect," 1855.

Made Simply For Amusement

By C. Milburn

The average writer on any given photographic subject withholds his pen until such time as he has perfected and improved both his procedure and his results to that stage that the average reader can hardly hope to achieve like results. With my little story, it will be entirely different. I am reckless enough

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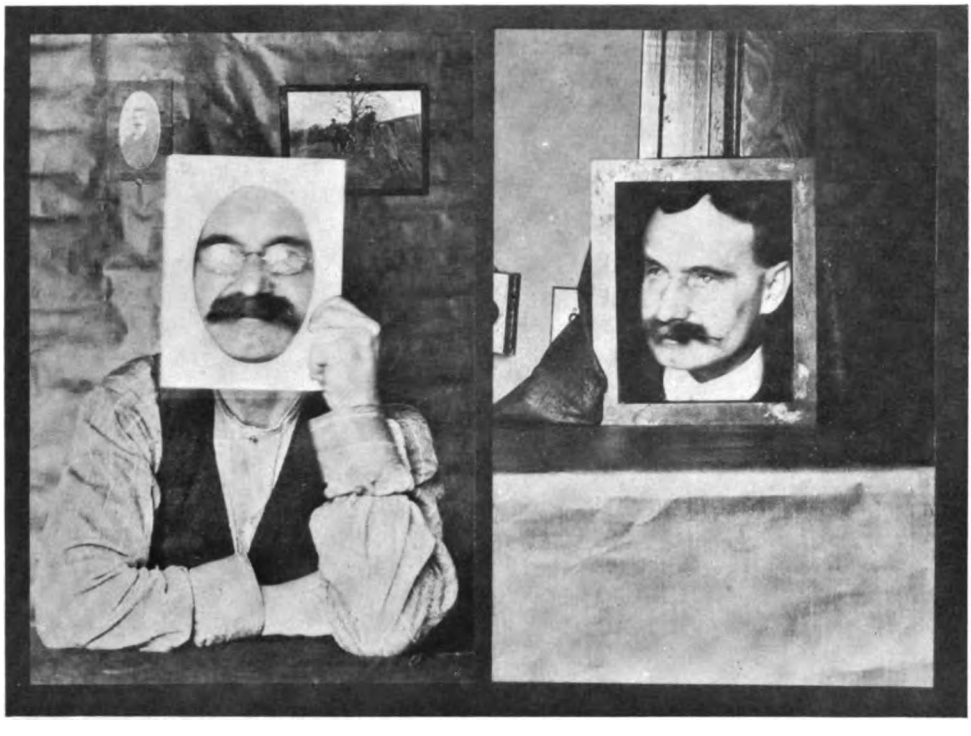
to show my first crude efforts, efforts that any camera user can certainly equal as to results, should he care to try, and I leave the work of improving upon my results to my readers who may be so experimentally inclined as to follow my steps. It will certainly not be hard to improve upon the pictures shown herewith, and variations and applications of the idea, as shown, should suggest themselves without number.

The picture at the right was made by taking an ordinary 8x10 printing frame, with the back removed, tacking one edge of a piece of black cloth to the



top, placing my head under the cloth, gathering it about my head as shown, holding it in place with my right hand while the bulb, at the end of eight feet of tubing, was pressed to make the exposure. The other picture was made in the same way, except that a brass oval trimming form was used in place of the printing frame. Both were made in an ordinary room on the afternoon of a very dull day, giving six seconds' exposure with stop f-11.

They were made simply for my own amusement; and, causing a little ripple of interest when shown to my numerous Kodak friends, I thought they might interest some of my fellow readers of CAMERA CRAFT. That is my only excuse for inflicting them upon you.

Within yourself lies the cause of whatever enters into your life. To come into the full realization of your own awakened powers is to be able to condition your life in exact accord with what you would have it.—RALPH WALDO EMERSON.

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STEREOSCOPIC DEPARTMENT

Stereoscopic Pictures With An Ordinary Kodak

By Edward D. Davison

Make a small table, as wide as the camera is long, and three inches longer than the camera is wide. Sink a screw nut in the center of the under side to engage the regular tripod screw. In what will be the front, left-hand corner, bed in a double or two-way spirit level. Nail strips on both ends and the rear side, to form a shallow box with three sides. The illustration herewith shows the construction quite plainly. To use, fasten it on the tripod and level carefully. Place the camera or kodak on one side, bringing the back snugly into the corner on that side. Make the exposure, change the film, slide camera over to the other side and make another exposure. The table being three inches longer

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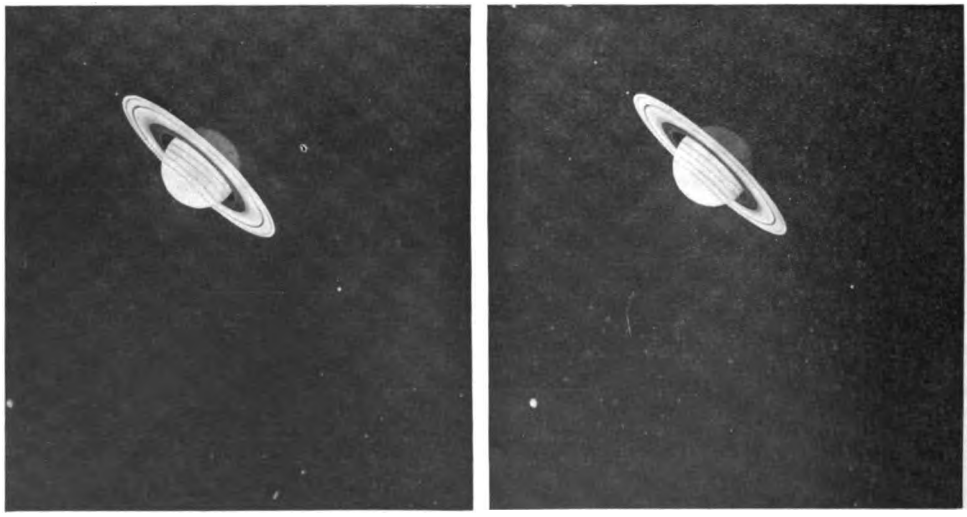
The stereoscopic picture below represents Saturn as it appears with a telescopic magnification of eight hundred times. Its rings are the only planes or flat surfaces in the known universe. The small globe shown at the left gives the approximate comparative size of the earth, eight hundred and eighty million of miles distant. Saturn revolves around the sun in twenty-nine and one-half years; revolving on his own axis every ten hours. The diameter of the globe is seventy thousand miles; of the outer light ring, one hundred and sixty-seven thousand miles; and of the inner dark ring and innermost bright ring, over twenty thousand miles. The thickness of the ring is two hundred and fifty miles. The picture is made very slightly indistinct in order to give the telescopic effect. The stereoscope should be held upward at an angle of forty-five degrees in order to heighten the effect. The picture is, of course, made from a model, but telescopists will agree that it is quite realistic in its close approximation to the planet as seen in the telescope.



SATURN AND HIS MOONS — By J. L. PARK

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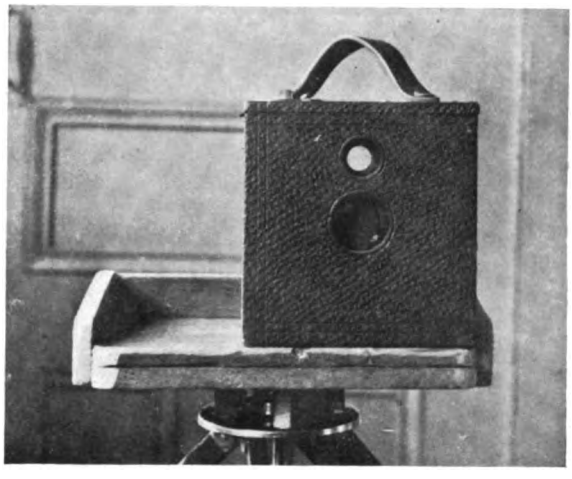
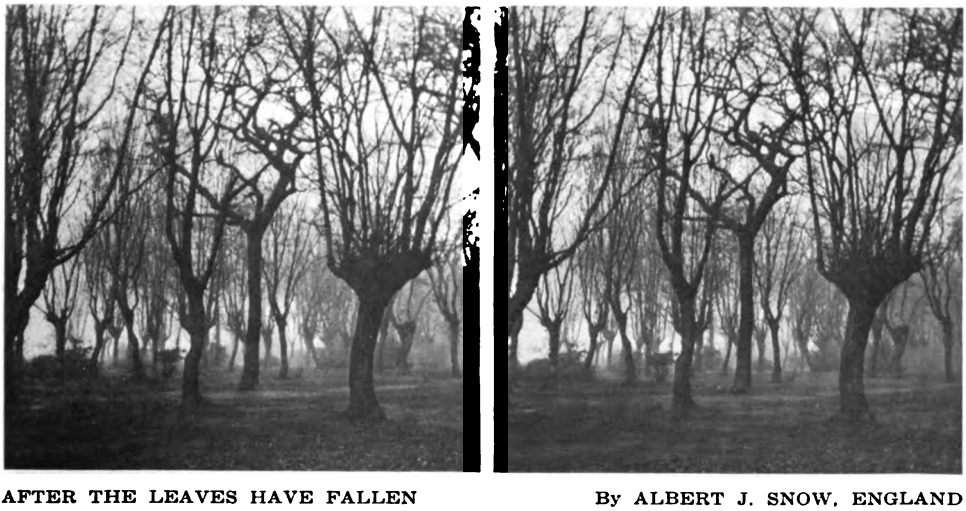
than the camera is wide, the lens will be moved exactly three inches when the camera is moved over to the other side. Three inches is the separation of the lenses in stereoscopic cameras and the negatives made as above will be the same.

In trimming my negatives, which are 3½x3½, I use a trimming board and cut one-fourth inch from each side, leaving the top and bottom untrimmed, which makes the finished prints 3x3¼. Each two negatives making a pair are fastened together, properly transposed, by folding a narrow strip of black paper like a long V-shaped trough, pasting it, and putting one on the bottom of the two negatives as they lie side by side, and one on the top, saddle fashion. This can be done still easier by using strips of passe partout binding, or the strips sold for binding up lantern slides. If so desired, the use of the black paper can be carried further by cutting the top strip of binding paper in such a way that it gives the rounded corners to the top of the prints. A narrow strip down the center and a binding of the black paper along the two end edges, and no mask is required in printing.



I find that, working in this way, it is easy to make good landscapes, views, waterfalls, and the like. Even figures may be included if they are cautioned not to move between the two exposures.

What we most need is not so much to realize the ideal, as to idealize the real.—F. H. HEDGE.



AFTER THE LEAVES HAVE FALLEN — By ALBERT J. SNOW, ENGLAND

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

TO TITLE NEGATIVES: Take your smallest spotting brush and your stick of India ink and mark the title on the glass side of your negative, in any style of brush letters. This does away with any reversed lettering and the title can be washed off and changed to suit. This is very much easier than the many cumbersome methods usually advised.—H. H. Wiles, Colorado.

PERFECTLY FLAT POST CARDS: Using a moderately hot iron, lay card face down on a folded cloth and run the iron over the back rather slowly. Then, while the card is still hot, place it between the leaves of a book until cool. Be sure the card is bone dry before ironing it or it may stick to the cloth. When cool and removed from the book it will be found perfectly straight and flat. A lot of cards may be handled in this manner in a very short time.—E. H. R., Michigan.

BORING HOLES IN GLASS: In the June number, a correspondent says: "Do not try to bore holes in glass with a drill made of steel." This advice would hold good if he had added, "if you do not know how." As to the "how," make the point of the drill V shaped and quite hard, and keep it wet with turpentine while using it. With a little practice, one need have no trouble in drilling holes in glass as easily as in metal. Only, remember that the drill must not be allowed to go through the glass and come out on the other side, as it is the catching of the drill as its full diameter comes through that breaks the glass. Drill a little more than half way through, then reverse the glass and drill from the other side until the drill meets the hole first made, but does not go through. Then, with a rat-tail file, file the hole to size wanted. Use plenty of turpentine and you can bore or file glass as you wish.—William H. Blacar, Maine.

THE TIME TO PRINT THIN NEGATIVES: Occasionally the amateur will have a thin negative that, were it possible to get even a fairly good print therefrom, would have but little of that salvability which is required in such cases. Only recently I have figured out a little genuine pleasure that I could get from my negatives of that kind on the very days that are generally conducive to "blues" of a pronounced navy shade. Negatives that would prove a failure with any variety of artificial light are hunted up and placed where they

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will be handy; and, when the day comes that the sky is overcast and the rain pouring down in a manner to cause one to wonder as to what is the very worst thing he can do, these negatives are printed. And I am made happy by the improved results. I print by a window, a single pane, of course, 24x36; screening off half or more. Printing is done at a distance of eight feet from the window; or, if it is an exceptionally dark day, I may go as close as one foot therefrom. My experience has been that this natural light is far superior to the artificial variety, and that nature's way of veiling the sun is better than using sheets of tissue paper and the like.—J. W. Moore, Indiana.

A FIELD HELP: A hand mirror, one that will slip into the pocket, is a convenient addition to the field outfit. It will assist in lighting up small, shady subjects, like birds' nests containing eggs, and is useful in focusing. For the latter it is as efficient as a cloth. Place its lower edge against the open camera back, the focusing screen at a forty-five-degree angle to the ground glass, and shade it with the hand. You will find this an easier way than bending your body into a letter S in order to get your eyes on a line with the focusing screen. —F. B. Odell, New York.

A TRIPOD STAY: Once a little dog ran under the tripod of my camera. It was excited. Its tail was not more than five degrees from the zenith, and very rigid. The tail struck one of the tripod legs and set it vibrating, and before I could reach the spot, the camera fell and was put completely out of commission. Another time in my experience a train struck the tripod (as the lady rounded a curve) with the same happy result. For years I had dreamed of a tripod stay that would be effective and at the same time small and out of the way. I finally decided to bore some holes in the legs about four inches from the head and bend a stiff wire so that the ends would fit into the holes. I intended to remove these wires after use and carry them in my pocket. On going to the hardware store to get the wire, I explained to the dealer what I wanted to do with it. He looked me straight in the eye, and, without a second's hesitation, said: "Why don't you use hooks, just common hooks?" I told him I had only been working on the matter about ten years and I hadn't been able to think of hooks yet. That hardware merchant lifted the burden of life off my shoulders with his "simple hooks."

From that day on, my tripod stay has been ordinary hooks. At first I used them four or five inches long, but found that this was not necessary, and I now use about a three-inch size. They have saved the camera many times, and are always a help, as one can step away from the instrument without fear of its being knocked down. A tripod stay is not to make the camera rigid, but just to stop the legs vibrating, by holding them together, in case they are started going by some accident.

To apply, stand the tripod on a carpeted floor or some other level place, with the legs at full extension and placed evenly, or so that the head will be level and the legs at the angle at which you are accustomed to use them. Use the hooks that have a screw-eye attached to one end and a separate screw-eye for the hook to be slipped into. Take one of the hooks and lay it across from

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one leg to another and mark exactly where the fixed screw-eye must be placed. Do this with the three hooks so that one will be between each opening between the legs. Start the hole for the screw-eye with a gimlet or by driving in a nail, so as not to risk splitting the leg or twisting off the screw-eye in the hard wood. Screw the hooks in. Now place the hook in the loose screw-eye and lay it over against the opposite leg, and when it is just taut, strike the ring of the screw-eye with a hammer so as to dent slightly the spot where it rests. Or carefully make a mark at that spot with a knife or other tool. Screw the eyes in all around in the spots indicated and you will be ready to work with perfect security. As to tipping the camera to adjust it to uneven ground, to level it, etc., there is quite a generous play in the hooks, and if this is not enough, it is almost as easy to let one leg in or out the necessary distance as it is to be picking up the leg and altering its distance from the others in order to adjust it. If you wish to confine the hooks when the tripod is folded, just put a rubber band around where it will grasp the ends. For my part, I don't mind hearing them jingle,—it is rather musical.—F. M. Steadman, Yucatan, Mexico.

A SATISFACTORY PASTE: I do not remember having seen a formula for paste in CAMERA CRAFT recently, so I send mine. Some may object to the acid in the formula, but I have pictures here that have been mounted fifteen or twenty years and they show no signs of being damaged by it. Well boiled and thoroughly stirred during the cooking, it is all right. Any left over in the spring, I keep all summer and use in the fall. The formula is as follows:

Wheat flour	4 ounces
Water	16 ounces
Boracic acid	10 grains
Nitric acid	1 dram

After boiling, add five minims of oil of cloves. A dram of benzoate of soda will increase its keeping quality, but it is not essential. I will add two other formulas, but it has been so long since I used them that I have forgotten how they work.

Wheat flour	1 pound
Water	6½ pints
Sugar	3 ounces
Powdered alum	150 grains

Mix, boil, and stir in three-fourths ounce of oil of cloves.

The other:

Wheat flour	3 pounds
Water	10 quarts
Powdered alum	100 grains
Oil of cloves	1 dram

Add the oil of cloves after boiling as in the others. In each case, the flour is to be mixed with a small part of the water and rubbed smooth and free from lumps. Ice water seems to facilitate this. Then the remainder of the water, in which the other ingredients have been dissolved, is added, and all put to boil.—James F. Wood, Pennsylvania.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, AUGUST, 1911 No. 8

Our "Shop Talk"

There are three things we want to talk about this month, but we will not try to take them up in the order of their importance, because their relative importance will vary with the different individuals to whom this talk is addressed. First, there is the matter of the supreme modesty of so many of our readers. One gentleman wrote in and kindly offered to accept a place on our advisory board if we considered him far enough advanced as a photographer, enclosing a few of his prints to show just how much he lacked in that direction. It is needless to say that he is, or would be, if his work were less perfect, just the kind of a member we want. He is just the reader who can tell us what the average reader, the one we want to help with our magazine, needs in the magazine. There are, no doubt, hundreds just like him who could be of the greatest assistance to us, and who would gladly do all they could to help, but that monumental modesty stands in the way and keeps them from coming forward. And that is only one example. The same thing stands in the way of our getting criticisms, suggestions, even articles for our pages. The next point that calls for attention is the tendency of our correspondents to attach too much importance to the promptness, or lack of it, of our replies. The average reader writes a few letters a month; his correspondence is confined to a score, more or less, of his friends. And we are always glad to be numbered as one of those friends. In his case it is a comparatively easy matter to keep the subject in mind and answer letters promptly. But he writes us, there is a delay in the reply, and he assumes that it is our way of saying we do not wish to be troubled with his letters. He forgets that our correspondence list numbers thousands; that by the time his letter reaches us, a reply goes, and he writes again, the number of letters we have written meanwhile has somewhat obliterated or dulled our recollection of his particular correspondence. He does not know that there are weeks when our time can only be given to the most urgent business correspondence, with the result that his letter gets buried quite deep in the pile of unanswered correspondence; and we might mention that an editor is notoriously unsystematic in the matter of his correspondence. So please bear all this in mind. If you do not get a prompt answer, it does not mean that your correspondence is not desired. Neither does it mean that the time necessary for a reply is begrudged. It only means that the letter came at an inopportune moment and the clutter and confusion of an editorial desk are responsible for the rest. Write again. We have yet to receive an unwelcome letter and have yet to intentionally neglect a single correspondent. On the other hand, we know that many correspondents have

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been woefully neglected; that thought is the one unpleasant feature in our otherwise thoroughly enjoyable work. Coming to the third matter, it is nothing more or less than our desire to help all our readers to keep an unbroken file of the magazine. As a worker progresses, he finds himself becoming interested in some, to him, new branch of photography, and a file of back numbers is often a mine of information on that particular subject. A file is always well worth preserving; photographic information goes out of date very slowly. We give considerable space to the storage of a few of each past issue, to the end that back numbers can always be supplied. We are always glad to furnish readers, free of charge, with copies dated within the time of their subscription and less than a year old. Other copies we can generally supply at the original price. If you like our magazine, keep your file complete. We are only too glad to help you to do so by sending you any missing issues at little or no cost.

The London Salon of Photography, 1911

This exhibition will be held at the Royal Water Color Societies' Galleries, 5a, Pall Mall East, London, from September ninth to October twenty-first, next. This is the old home of the Photographic Salon for years and is undoubtedly the finest gallery of its kind now in London. The membership includes such names as those of Yarnall Abbott, Gertrude Kasebier, W. H. Porterfield, and others in this country; Rudolph Duhrkoop, Theodore and Oscar Hofmeister, and others in Germany; representative pictorialists in England, with Austria, Holland, Italy, and other countries represented by prominent workers. Pictures from this country can be sent unframed; those that are accepted will be suitably framed at the expense of the Salon. Each exhibit must be accompanied by an entry form and a fee of two shillings (fifty cents). Several local workers have signified their intention of sending a few pictures, and others desirous of avoiding the trouble of attending to the details of shipment and return can send their pictures directly to us and they will go forward in one package from here, thus minimizing expense and doing away with all trouble on their part. The closing day is August twenty-first, so that the reader should send his pictures on to us immediately upon receipt of this notice. Eastern contributors should send direct to Honorable Secretary, London Salon of Photography, address as above.

Stanley McGinnis Here

Stanley McGinnis, the well-known lecturer on color photography, paid our office a visit the latter part of June. He had just closed a series of lectures in Los Angeles and was on his way to New York, via Denver, his home city. He reported the greatest interest in his work wherever he has lectured, particularly in New York City, where, judging from the press notices, nothing of the kind had previously been seen. His last lecture in that city was before the New York Yacht Club, on the evening of March second, the next being given on the morning of the tenth, less than eight days later, before the Friday Morning Club, of Los Angeles. Mr. McGinnis is experimenting with the Dufay Dioptichrome plate, and, from results secured, he believes that they will enable him to excel his past performances.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

A USEFUL VARNISH

Celluloid varnish is so easily made and so generally useful that a bottle should form part of the equipment of every photographer. It is made by dissolving celluloid in amyl acetate. The emulsion can be cleaned from waste roll film and the resultant clean celluloid used. It is simply cut into small bits, placed in the amyl acetate and allowed to dissolve, shaking occasionally. The formula calls for one hundred and twenty to one hundred and fifty grains of celluloid to sixteen ounces of the acetate. But the exact proportion does not matter particularly. Made according to the formula it is rather too thick and requires too long a time in which to dry. The best way to go about it is to let the acetate dissolve about all the celluloid it will take up, and then add nearly enough alcohol to double the bulk of the solution. If too much is added, there will be some of the celluloid thrown down. Made in this way it is much cheaper, dries much quicker, and flows better, being thinner. As a varnish for negatives it is perfect. It is applied without having to heat the plate, and drains away leaving a perfectly even coating. A brush is used only to distribute it over the surface of the negative when the user is not practiced in the matter of flowing as with collodion. When set up to drain it is an easy matter to catch the varnish that runs off, and this can be returned to a bottle and later diluted with alcohol and filtered ready for use. This varnish is unaffected by damp, so much so that varnish negatives can be placed to soak in water for hours without damage to the film. The varnished negatives can be cleaned off with a damp rag should they become dirty. Heat does not cause it to soften, making it ideal for lantern slides and transparencies. Furthermore, the surface is an excellent one upon which to do retouching, no medium being required. It is a fine varnish for bromide and carbon opals, allowing as it does of frequent cleaning without damage to the picture. A ground glass focusing screen that seems a little too rough can be made to assume a finer surface by giving it a coat of this varnish. It is used extensively for lacquering bright metal surfaces and a coating will be found just the thing for the metal work about a camera. Tools can be protected from rust by applying a coating, and enamel trays repaired most effectively when the coating has been chipped off or cracked. In fact, one who will supply himself with a bottle will find hundreds of uses for this excellent varnish.

FULLY WASHED PRINTS

One of our local amateurs has a good scheme for determining just when his prints are thoroughly washed. It is not original, as he claims he read it in one of the foreign magazines at the club, but he is the only one we have ever found using it. It consists of adding one fiftieth of one per cent. of eosine to the fixing bath employed. The fixing bath then gives the prints a slight red color and when this has been entirely washed out the prints are safely clear of any remaining fixing bath ingredients. He finds it quite surprising how often a patch of the red color will be found remaining on some portion of the print, indicating quite clearly that such print has been allowed to remain in contact with another to an extent that prevented the complete washing out of the fixing solution, even when it was thought that the prints had been kept well separated.

REMOVING YELLOW STAINS

Yellow stains due to old developer or a developer containing insufficient sulphate of soda, may be removed by immersing the well washed negative in a solution made up as follows:

Iron sulphate	3 ounces
Sulphuric acid	1 ounce
Alum	1 ounce
Water	20 ounces

After which, wash well and dry.

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MATT CARBON PRINTS

In reply to an Ohio correspondent, his carbon prints can be given a matt surface by using opal glass for the temporary support. The glass is not so convenient as a flexible support, but it should not present any serious difficulty. The first time, it should be waxed and polished two or three times before using. The ordinary waxing solution, suitable for flexible support, is not suitable. Make one as follows:

Beeswax	30 grains
Yellow resin	100 grains
Benzole	20 ounces

This evaporates rapidly and for that reason the opal plates must be rubbed over rapidly with the solution and immediately polished. As a further piece of advice, do not bring the print in contact with the opal glass under water as is generally advised, as dirt will surely become imprisoned between the two, no matter how clean the water appears. Soak the tissue, flood the opal with water as it lies on a board, and then, lifting the tissue by two diagonally opposite corners, lower the center onto the plate and then allow the two raised opposite corners to come down last. Squeegee strongly as possible without danger of tearing the tissue.

AMMONIUM PERSULPHATE REDUCER

Persulphate of ammonia, as usually employed, is regarded as having practically no keeping quality. If the solution be made with distilled water and made slightly acid, it will keep almost indefinitely in a well stoppered bottle in the dark. As a reducer it is prone to stain, but this can be overcome by adding sulphite of soda to the acidified solution. A good formula for a stock solution is as follows:

Ammonium persulphate	1 ounce
Sodium sulphite	85 grains
Sulphuric acid	85 minims
Water distilled to make	9¼ ounces

This should be mixed up at least a day before being used. If the negative to be intensified is an old one or one that has been subjected to a hardening bath of alum or formaldehyde, one part of the above to four parts of water will be about right; one part to eight of water will be better under ordinary circumstances. The tray should be rocked during the immersion of the negative, and the user must regard the appearance of a white turbidity over the denser parts as an indication that reduction is taking place. When it is judged that the necessary amount of reduction has been almost secured, the negative is taken out, given a wash in three or four changes of water quickly and placed in an ordinary one-in-four hypo solution for fifteen minutes. This hypo bath should be kept alkaline by having a slight amount of alkali added to it in order to neutralize the small amount of acid that might be present. Used in this manner, persulphate of ammonia will be found to act as an ideal reducer for the sort of negatives that produce soot-and-whitewash prints, leaving them with printable highlights and with all the original gradations in the shadows retained.

REMOVING INK STAINS FROM PRINTS

A not too strong solution of oxalic acid will generally remove ink stains from platinum prints. If the ink be an aniline one, such as is used for rubber stamps, a five per cent solution of sodium sulphite, slightly acidulated with citric acid, will usually prove effective. The same result can be obtained with metabisulphite without the acid. Prints on printing-out and developing papers should first be hardened with alum or formaline solution, and then well washed.

WIE ERLANGDT MAN BRILLIANTE NEGATIVE UND SHONE ABDRUCKE?

Under this name is published a book in its fourteenth edition, which shows the popularity it enjoys among German camera devotees.

This new edition has been greatly improved and enlarged by its author, Dr. G. Hauberrisser. It contains twenty-five illustrations and instructive plates to aid in making the text as clear as possible. The title, "How can one obtain brilliant negatives," indicates that anyone who has not been able to produce such will find this book of the greatest help toward attaining success. Those of our readers who understand German should not fail to add this book to their library. The price is only one mark twenty-five pfennigs, and we will be pleased to order copies for forty cents. It can be obtained direct from Ed Liesegangs Verlag (M. Egger), Leipzig, Germany.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

POWERFUL INTENSIFICATION OF GELATINE NEGATIVES

Those photographers who are acquainted with the wet collodion process are gradually becoming fewer in number, and it may, therefore, be worth while to describe some methods of intensification of which good advantage may be taken in treating gelatine plates which are used in the reproduction of plans, line originals, etc. Methods of intensification, such as were used with wet collodion, cannot be employed for dry plates without certain modifications, since, leaving the extra time of washing out of the question, the gelatine film does not give up so readily certain compounds as does the thin film of the wet collodion plate. It is, however, possible to modify the older methods so as to adapt them to the new plates.

Intensification with copper bromide was first proposed by M. Féry for dry plates. Unfortunately it is easy to produce a heavy brownish fog which presents considerable difficulty in its removal. A method which can be used with great prospect of success, but not with absolute certainty, is the following: The negative, after well washing, is placed in the following bath, which may be kept in use for a considerable time:

Copper sulphate...	25 gms.	½ ounce
Potassium bromide	25 gms.	½ ounce
Water	1,000 ccs.	20 ounces

This mixture acts like a solution of copper bromide. The negative is rapidly bleached, the silver of the image being converted into silver bromide and cuprous bromide.

Subsequent washing will remove the soluble salts, but it must be done rapidly, since the cuprous bromide quickly oxidizes in the air and thus makes it difficult to obtain the intensification. The best plan is not to wash the negative in ordinary running water, but to pass it through a series of three or four baths of two per cent acetic acid, in each of which it is allowed to remain for about five minutes. The last of these baths, when poured into a measure, should become only very slightly blue on addition of ammonia. There will always be some slight bluish color, since the cuprous bromide is slightly soluble. After washing with distilled water, which removes the greater part of the acetic acid, the negative is placed in a two per cent solution of silver nitrate, where it rapidly darkens. The re-action here, according to the majority of authorities, is that the cuprous bromide and silver nitrate react, giving silver bromide, copper nitrate, and metallic silver. But it may be questioned if the brownish deposit thus obtained actually consists of metallic silver. It appears to be slightly soluble in solutions of soda sulphite.

After a very short washing in distilled water, the negative is placed in a weak solution of sodium chloride (common salt), which serves to precipitate the excess of silver nitrate, the presence of which, without this precaution, would lead to brownish fog through reduction of the gelatine of the film. The slight deposit of silver chloride which is formed can be dissolved in a ten per cent solution of sodium sulphite, which is almost without action on the silver bromide.

The negative may be finally re-developed, preferably with amidol, and, of course, in full daylight.

The intensification produced by this process is great; the grain is slightly enlarged, but so little that fine transparent lines are not choked up. If the negative is seen to be veiled in intensification, any reducer may be used to clear it, the image being formed of metallic silver. Good results are obtained with almost absolute certainty by following the above instructions precisely, that is to say, when working with plates of thin emulsion film. If necessary, the process can be repeated several times over.

Intensification with lead is as simple in use as the foregoing method with copper bromide is complicated. The intensification given is extremely great, but, unfortunately, the size of the grain is greatly enlarged, and fine lines have a tendency to choke. The following is the method: The negative, which should be well washed, is bleached completely

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in a solution made as below, which should be filtered between each time of use:

Potassium ferricyanide	40 gms.	360 grains
Lead nitrate	60 gms.	525 grains
Acetic acid	20 ccs.	3 drams
Water	1,000 gms.	20 ounces

It is necessary to add the acetic acid in order to cause the solution to penetrate into the gelatine.

The chemical effect of this intensifier is to form lead ferrocyanide, which acts upon the silver in the image, giving lead and silver ferrocyanides. After bleaching, the negative is washed in three or four baths of three per cent pure hydrochloric acid (which should contain no iron), each bath being allowed to act for about five minutes. The object of the hydrochloric acid is to prevent the formation of basic lead salts, and thus to facilitate, to a great degree, the removal of the soluble salts. The ferrocyanides are converted into chlorides which are of an equal degree of insolubility. After washing with running water, in order to eliminate all traces of ferrocyanide as shown by the yellow color, the negative is placed in a weak solution of ammonium sulphide, in which it quickly darkens, forming an image of silver sulphide and lead sulphide.

It is somewhat remarkable to find that the intensification can be repeated indefinitely; probably the lead ferrocyanide acts as an oxidizing agent of the silver sulphide, the lead sulphide probably remaining intact. The process would be free from all reproach if the slight fog, which is left by the last operation, could be removed by a suitable reducer. It has been found that this can be done most easily by immersing the plate for a few minutes in a weak bath of bromine water, followed by washing for a few minutes and immersion in a hypo bath; the latter removes small quantities of silver bromide and of lead bromide which are formed.

It is interesting to note that the gelatine almost completely loses its solubility in boiling water in the portions which are intensified, but not in others.

Messrs. Wratten and Wainwright prepare plates of extremely thin film which can be easily developed before, or better after, fixing by a physical developer. This latter has the following composition:

Metol	20 gms.	180 grains
Citric acid	100 gms.	2 ounces
Water	1,000 ccs.	20 ounces

To one hundred cubic centimeters (three and one-half ounces) of this stock solution, ten cubic centimeters (three drams) of ten per cent silver nitrate solution are added at the moment of use.

At the end of four or five minutes, the plate is well scrubbed with a tuft of cotton wool and development commenced anew with a fresh bath, this process being repeated until sufficient intensity is obtained. Any veil which may be left in the finished negative, or positive, is removed with any convenient reducer.

The definition obtained by this process is excellent, the results resembling those on wet collodion. It is an excellent process and gives most beautiful results. — Andre Callier in *Bulletin Association Belge de Photographie.* Translated by *British Journal of Photography.*

TINTING OF PHOTOGRAPHIC PAPERS

The *Photographische Industrie* contains a paper by Dr. K. Kieser on the use of analine dyes to tint bromide and gaslight prints. It is a method I have used myself, and I have also found it advantageous to dye some fixed-out lantern slides with the same colors as are to be used on the papers, so that, by viewing a print through such tinted slides, it is easy to judge which dye is most suitable to any given print. I may state that, besides the colors given by Dr. Kieser, I have used Bismark Brown and some of the dyes supplied as Japanese colors for lantern slides with success. Dr. Kieser's directions are as follows:

"The dye solutions are best kept in a concentrated form—say, one part in one hundred parts of water—and further diluted for use. The most suitable dilutions will in general be to a strength of one part of dye in ten thousand parts of water. The well-washed bromide or gaslight prints are placed, either wet from the washing dishes, or after drying, in a clean dish containing the dye bath, and allowed to soak until the required depth of tint is obtained. It should be noted that the tint becomes slightly deeper on drying. In immersing dry prints, air bubbles are liable to form, and should be removed with the tip of the finger or a tuft of cotton-wool. After dyeing is completed, the prints are passed

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for an instant through a dish of clean water and hung up to dry. Care should be taken that no drops of solution adhere to the film side, otherwise the prints will be spotted. They should be removed with a fragment of filter paper, or taken up with a tiny portion of cotton-wool. It is best to mount the prints as quickly as possible, whilst they are still wet, with a good paste; but, if preferred, prints can be allowed to dry, and mounted after a further short immersion in water.

"The diluted dye solutions, after use, may be repeatedly employed; they may be strengthened from time to time with small quantities of the strong stock solutions, being preferably filtered each time before use. In the case of using combinations of dyes, it is best to immerse the prints in a bath containing one dye only, and then in one containing another; the result is less certain if both the dyes are used in a single bath, although this, with some knowledge of the dyes, may frequently be done. Some dyes will scarcely color the paper side of the prints, whilst others will stain the image itself, and the paper back to an equal degree of intensity. By taking care in the selection of the dyes, the colors are of good permanence, but will, of course, not stand prolonged exposure to sunlight without altering to some extent. A few of the dyes found suitable for the above process are as follows: Alazarin saphirol for soft blue tones; naphthol green B for soft green tones; chloromin brown G for brownish tones; papier-echt-bordeau B for purplish tones; brilliant crocein 3B for yellowish-red tones; echt-light-gelb 3G for yellow tones.

"By mixing concentrated solutions of the two last-named dyes, an intense fiery red tone is obtained, very suitable for firelight and similar effects. The photographic dealer might well turn his attention to preparing these dyes in concentrated solutions for sale to those demanding these special tints."

NIGHT DARKNESS AS A BACKGROUND

Ward Muir, writing in *Country Life,* says: "I have found that many subjects—fruit blossom is a case in point—suffer from what we photographers call a spotty background, and that such subjects, if taken at night, not only have a curiously decorative (if not necessarily quite natural) effect, but stand out with beautiful distinctness because there is nothing, or next to nothing, visible behind them. They emerge from a mere blank of vague blackness, and are thus isolated from distracting surroundings which would have spoiled them utterly if they had been photographed in the full glare of day. Ordinary flash powder is used, and, of course, the light 'carries' only a very short distance, so that close-up subjects must be chosen or they will not appear on the plate."

I have tried the above, and for isolated flowers such as cosmos, lilies, etc., the plan works well. The camera should be focused during daylight; and, unless wind is present, magnesium ribbon is better than flash powder.

PURIFICATION AND REDUCTION OF SILVER

Edgar H. Booth, Sydney University, writing in the *Chemical News,* says: "In the laboratory it is often required to make small quantities of silver nitrate from a silver coin, or from a small accumulation of silver chloride. The method of reducing the silver chloride by fusing with sodium carbonate in a fire-clay pot is long and inconvenient; the method of reduction by contact is also tedious, and, moreover, is often rendered unsuitable for analytical work owing to impurities in the zinc. The best laboratory method would then seem to be the well-known one of reduction by boiling with sugar and potassium hydrate. This, however, is also at fault, owing to the fact that the first portion of metallic silver produced forms a protective coating around the unaltered silver chloride, thus preventing complete reduction. It was thought that this difficulty in the last method could be entirely obviated, or at least minimized, by first dissolving the silver chloride in ammonium hydrate, before boiling with the sugar and potassium hydrate.

"This idea was tested, and was found to work so well in practice that the filtrate from the reduced silver was entirely free from the metal, and, moreover, after thoroughly washing the reduced silver with hot water, the metal dissolved completely in dilute nitric acid, leaving no trace of silver chloride. The reduced silver formed a non-adherent mirror on the sides of the vessel, which broke into a more or less spongy mass on continued boiling. The above idea led to another method of reduction to metallic silver.

"Remembering that hydrogen peroxide reduces silver oxide to metallic silver, it was thought probable that the addition of sodium

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peroxide to a cold ammonia solution of silver chloride would lead more conveniently to the same result. This was found to be the case when actually tried, and no silver could be detected in the filtrate, provided a sufficiency of sodium peroxide were used. Instead of adding the peroxide to the solution, it was found to be a saving of the former if the solution were poured gradually on it, less peroxide being required for a given quantity of solution.

"When action had apparently ceased, the mixture was boiled, diluted, and filtered. The silver formed by this method also dissolved completely in dilute nitric acid, being free from all traces of the chloride.

"These suggestions are put forward as quick and convenient methods of converting small quantities of silver chloride into metallic silver, from which the nitrate may be obtained.

"Whilst no claim is laid to this being novel, I have seen no previous mention of these methods, so they may be found useful."

NO MORE OVER-EXPOSURE

The photographic sensation of the past month is E. Sanger-Shepherd's paper at the Royal Photographic Society, London, on hydrazine emulsions. The lecture in question is very fully reported in the *Amateur Photographer* and in the *British Journal of Photography,* from whence we learn that Mr. Caldwell had discovered and is still investigating a remarkable property possessed by certain chemical substances derived from hydrazine (hydroxylamine), which, added to silver emulsion, or used to bathe the plates, rendered the latter incapable of over-exposure. The lecturer is reported as follows: "The result of making an increasing series of exposures on such plates was that the straight-line 'curve' of Hurter and Driffield, instead of passing into the characteristic period of over-exposure, was continued as a straight line; in other words, the practical effect of giving even the most excessive degrees of over-exposure was that the gradation of the plate was retained, although with normal development, the densities produced were very much greater. He, Mr. Shepherd, had made negatives on the new hydrazine plates, giving in one case the normal exposure, and in others increasing degrees of exposure up to five thousand times, and still obtaining negatives which would be described as perfect. In the case of greatly excessive degrees of exposure it was, of course necessary to use a very dilute developer. Just as the plate was incapable of showing defects due to over-exposure, so, also, reversal, so far as his experiments had gone, could not be produced. He showed lantern slides of an electric incandescent lamp and an electric arc, in each case taken on an ordinary plate and on one prepared with the hydrazine emulsion. In the case of the ordinary plate the filament of the lamp and the focus of the arc were both completely reversed, showing as black in the positive lantern slide. In the case of the hydrazine plates, reversal was absent, the filament and the arc of the lamp forming the highest light in the lantern slides. Mr. Sanger-Shepherd pointed out that such striking results as these opened up a new field in practical photography. So long as sufficient exposure was given it did not matter, within the widest limits, what the actual time of exposure was. And development might easily be reduced to an entirely automatic process, the time of which, unless the degree of over-exposure was outrageously excessive, might be fixed. His own preference was for a time of development of two minutes. He did not think they should be called upon to spend more than two minutes on the development of a plate. It was a convenient time, which allowed of plates being placed in the developer, covered from light, and then, by the time a cigar had been comfortably lighted, development would be about complete. He could not say that a system of development had been completely worked out as yet for the hydrazine plates, but it probably would be within a very short time.

"Another important effect of the use of hydrazine in the emulsion was that a plate, or paper, might be either printed out like printing-out paper or partly exposed and developed in the ordinary way. He showed a series of prints, some developed and others printed out, but all made on paper cut from the same sheet. In this connection it was also important to note that the gradation of the print remained the same, although the method of production was so entirely different. The plates or papers, which were printed out, could be simply fixed in ordinary hypo, when they gave a pleasing warm tone, or then could be gold-toned in the usual way, or over-exposed (for development) so as to

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give a series of warm tones, in each case with retention of the gradation. All Mr. Sanger-Shepherd's experiments had been made with the high-speed hydrazine plates at his disposal, and having a speed of four hundred Hurter and Driffield. Fast as these plates were for camera exposures, when printed out the image was of a fineness and color such as would be attained on a slow gelatino-chloride transparency plate.

"Further, at the present time there were hundreds of brands of photographic papers—rapid and slow bromide, gelatino-citrate, printing-out paper, and so on. But if they made a pure bromide and chloride emulsion, and added to it some hydrazine, they got a paper which might either be used for printing out in the ordinary way, or might be given a slight exposure to light, developed with an ordinary developer to the full density, and fixed. Another small application had reference to celluloid. It was well known that ordinary printing-out paper would not work upon celluloid; it required the presence of the organic matter. But the hydrazine emulsion coated on celluloid could be printed out, forming a very fine surface, which would, he thought, have commercial possibilities in the way of producing enamel-like portraits. In conclusion, he had no doubt that, provided enough exposure were given, they might always be sure of securing that perfect negative about which Hurter and Driffield were so anxious. If they kept within a range of tints of one to thirty—and when printing a negative on white paper it was of no use to have a greater scale on the former than that—they need not trouble either about over-exposure or reversal."

CLUB NEWS AND NOTES

CALIFORNIA CAMERA CLUB

The Club gives a free illustrated lecture each month, the last or June one being the two hundred and forty-seventh. This is a record of which any club may be proud. Outings are held regularly. These affairs are providing much good photographic work for the club's use for lantern slide sets, print exhibits, etc. The region contiguous to San Francisco Bay abounds in fine material for the camera, and subjects in almost unlimited variety. New demonstrations and classes in various branches of photographic work have been arranged for the balance of the year.

ELYSIAN CAMERA CLUB

The Elysian Camera Club and Historical Section was organized in 1902. The Board of Managers meet the first Tuesday of each month; regular meeting of the club, second Tuesday of each month; annual meeting, second Tuesday in May, when the election of officers takes place.

The Club offers all the advantages desired by the amateur photographers. The Historical Section is a branch of the organization, having for its object the collecting of historical records of Hoboken and vicinity, these to be exhibited in a proper manner. All communications should be addressed, Charles Westerburg, 636 Park Avenue, Hoboken, New Jersey.

THE EXHIBITION AT ROME

The catalogue of the International Exhibition of Artistic Photography at Rome, Italy, shows that two American photographers were honored by having pictures accepted by the hanging committee. These were Walter Zimmerman and H. Oliver Bodine, both old friends and contributors of this magazine. We have no way of knowing how many others sent from this country and we do not know how many Mr. Zimmerman sent, but we happen to know that Mr. Bodine sent just six, the number that were accepted, and that all were straight prints or enlargements from straight negatives made with the lens known as the Bodine Pictorial Lens. We mention this last fact simply because we reproduced, in one of our recent issues, several pictures made with one of these lenses, and these pictures have been rather severely criticised by some of our readers. We might also add that Mr. Bodine does not claim that the possession and use of one of the Bodine lenses will insure pictorial results. The lenses are simply a tool that will facilitate the production of a certain kind of work, and Mr. Bodine's success at the exhibition mentioned above confirms that claim.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

THE SECOND CALIFORNIA ALBUM

The second California album is nearing the end of its circuit and the director has been receiving the most enthusiastic congratulations from the members who were so fortunate as to have had sent in prints and in that way secured a place on the route list. It is unfortunate that, with as many members as California contains, we cannot have a larger and more representative collection for the circulating album. All who have contributed to the first and second are contributing to the third, showing that the album is fully appreciated by those who have enjoyed its visit. Members desirous of having their name on the route list of the next one going out should send a few prints to State Secretary W. C. Thomson, 3540 School Street, Fruitvale, California. The few prints will not be missed; it will cost but a few cents postage to forward the album when received, and then, if you are not pleased with the experiment, simply refrain from sending any more prints.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4954 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 200 South Marion St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

FOREIGN SECRETARIES.

French—Charles A. Wargny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German — George N. Baumiller, Nutwood, Ohio.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Alaska—P. S. Hunt, Valdez.

California—Sigismund Blumann, 3159 Davis St., Fruitvale, Cal.

Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

Connecticut—George E. Moulthrope, Bristol.

Florida—Capt. E. S. Coutant, U. S. Life-Saving Service, Oak Hill.

Idaho—Eugene Clifford, Weippe.

Illinois—George A. Price, R. F. D. No. 1, Summit.

Indiana—H. E. Bishop, 1704 College Ave., Indianapolis.

Iowa—C. E. Moore, Eddyville.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th St., Baltimore.

Massachusetts—John Mardon, 161 Summer St., Boston.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota—Leonard A. Williams, St. Cloud.

Mississippi—Emory W. Ross, Institute Rural Station, Edwards.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 266 Ford St., Ogdensburg.

New Jersey—Burton H. Allbee, 103 Union St., Hackensack.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon — Leonard S. Hopfield, Box 622, McMinnville.

Pennsylvania—L. A. Sneary, 2822 Espy Ave., Pittsburg, Pa.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Tennessee—George Parke, 292 Madison Ave., Memphis.

Texas—Frank Reeves, Roby.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

Wisconsin—H. Oliver Bodine, Racine.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at

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present acting as State secretaries in such of their respective States as have as yet no secretaries.

California—W. E. Thomson, 3540 School St., Fruitvale, Oakland.

Idaho—Eugene Clifford, Weippe.

Indiana—R. A. Underwood, 912 E. 15th St., Indianapolis.

Kansas—H. H. Gill, Hays City.

Mississippi—Joe C. Montgomery, R. F. D. No. 1, Box 36, Edwards.

Missouri—J. F. Peters, 6220 Berthold Ave., St. Louis.

New York—Louis R. Murray, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

Tennessee—George Parke, 292 Madison Ave., Memphis.

Wisconsin—F. W. Freitag, 500 Monument Square, Racine.

NEW MEMBERS.

2954—Anton W. Lachnit, 822 East 8th St., Columbus, Nebr.
3¼x5½ and 5x7, various papers, of general subjects; for buildings, landscapes, etc. Class 1.

2955—William McGingan, 2814 E St., South Omaha, Nebr.
Class 2.

2956—Elgood R. Whitford, 1685 New Haven Ave., Pittsburg, Pa.
5x7 and smaller, also post cards, various papers, of lake scenes, animal pictures and general views; for views, animals, water scenes or anything interesting. Class 1.

2957—Oscar C. Kuehn, 3405 Caroline St., St. Louis, Mo.
3¼x4¼, 4¼x6½, 5x7 and 6½x8½, developing paper, of landscapes, park views, flower studies, anything interesting, also subjects made with pin hole; for the same. Post cards only. Class 1.

2958—U. P. Stewart, Box 706, Westport, Ind.
3¼x5½, panoram 2¼x6¾ and post cards, developing paper, of studies of flowers and landscapes; for historical scenes, flowers and landscapes. Class 1.

2959—S. J. Neville, Cottonwood, Sask., Canada.
4x5 and enlargements as arranged, various papers, of views in Ontario and prairies, animals, child studies, etc.; for landscapes, especially tropical, mountain, foreign, animals, marines. Class 1.

2960—Fred M. Travis, R. F. D. No. 1, Marlboro, N. H.
5x7 and under, developing and printing-out papers, of miscellaneous views; for foreign views only. Post cards only. Class 1.

2961—William Golden, Box 114, Portola, Cal. Class 2.

2962—A. Protz, 746 La Salle Ave., Chicago, Ill.
5x7, various papers, of commercial subjects; for anything. Post cards only. Class 1.

2963—John Laduke, 816 Maggie St., Marinette, Wis.
Class 2.

2964—Miss Ella Burk, 510 N. Paulina St., Chicago, Ill.
5x7, developing paper, of scenery and general subjects; for anything. Class 1.

2965—Rev. Jos. S. Hirner, 2041 E. Grand Ave., St. Louis, Mo.
Class 2.

2966—Leon C. Lynn, care Lewis Hubbard Co., Charleston, W. Va.
3¼x5½, various papers, of pictures of camp life, etc.: for any kind. Class 1.

2967—Adam Wieser, 1206 Monroe St., Spokane, Wash.
Class 3.

2968—Henry A. Swanson, R. F. D. No. 1, Box 22, Swea City, Iowa.
4x5, 4¼x6½ and post cards, various papers, of landscapes. Post cards only. Class 1.

2969—W. D. Smith, 1827 Blake St., Berkeley, Cal.
Class 2.

2970—C. W. McAlester, Box 1264, Oilfields, Cal.
4¼x6½, developing paper, of views in and around the oil district; for general views, also stereo views. Class 1.

2971—H. B. Long, Box 212, Unity Station, Pa.
Post cards, 3¼x5½, various papers, of railroad scenes, etc.; for railroad scenes with those familiar with that line of work. Being employed as railroad telegrapher, wish to exchange railroad views only with those who do that line of work and especially with Western members as I have worked considerably on the Western Coast. Post cards only. Class 1.

2972—Miss Hilda E. Hogg, 2900 Victoria Ave., Regina, Sask., Canada.
Class 2.

2973—Mrs. Eva Wivell, Box 810, Shelton, Wash.
Class 2.

2974X—William P. Halliday, 974 Valencia St., San Francisco, Cal.
Post cards, of landscapes and marine views, good work; for post cards of equal quality. Class 1.

2975—Emerson Stoner, Greenwood Park Station, Des Moines, Iowa.
Class 2.

RENEWALS.

186—L. T. Brodstone, Superior, Nebr.
Post cards of lodge halls, inside and out, city parks, cemeteries and decorations; for the same. Class 1.

2272X—Orvis F. Jordan, 822 Washington St., Evanston, Ill.
Class 2.

2309—A. A. Richardson, 910 Beltrami Ave., Bemidji, Minn.
Is away from home on a photographic trip with his photo car and crew and cannot exchange further until November.

2521—W. L. Raab, Box 41, Dallastown, Pa.
5x7 and smaller, various papers, of landscapes, and few home portraits; for landscapes. All work sent and received on approval. Class 1 .

2545—H. E. Evans, Ayer, Mass.
2¼x3¼, 4x5 and 5x7, developing paper, of general views; for the same. Class 1.

2620X—E. Whitford, Shelton, Nebr.
Class 2.

2633—Lawrence Siebeneck, Ottawa, Ohio.
Up to and including 8x10, various papers, of studio work, also outdoor views and groups; for large exchange of good studio work. Anybody having good portraits, please reply; promise good work in exchange. Also desire views. Class 1.

CHANGES OF ADDRESS.

2271—Mrs. Fred W. Smith, Bellflower, Cal.
(Was Miss Sylvia A. Davis, Hynes, Cal.)

2278—L. I. Neikirk, 705 North St., Boulder, Colo.
(Was Urbana, Ill.)

2350—J. W. Green, Magnetic Observatory, Honolulu, T. H.
(Was Paonia, Colo.)

2436—G. M. Thompson, Grapevine, Texas.
(Was El Oro, Mexico.)

2552—Ira E. Briggs, 539 West 9th St., Erie, Pa.
(Was 536 W 7th St.)

2612—E. R. Hall, 217 Highwood Ave., Weehawken, N. J.
(Was Tiashoke, N. Y.)

2616—A. J. Whiddon, Elma, Wash.
(Was Waterville, Wash.)

2693—A. H. McKie, 1044 Lind St., Wheeling, W. Va.
(Was 2740 Moyston St.)

2779—W. A. Payne, 79 Beck Ave., Akron, Ohio.
(Was 928 E. Ann St., Ann Arbor, Mich.)

2831—Larrance Page, 2330 Roosevelt St., Berkeley, Cal.
(Was Greenville, Cal.)

WITHDRAWAL.

2042X—Mrs. F. D. Hathorne, Cushing, Maine.
On account of lack of time.

CORRECTIONS.

Division, 4948 Washington Ave., Chicago, Ill. stamp. Address Charles M. Smyth, 1160 Detroit St., Denver, Colo.

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OUR BOOK SHELVES

"A LITTLE LAND AND A LIVING"

The above is the title of a book from the pen of Bolton Hall, the author of "Three Acres and Liberty," "Things as They Are," and others. This, the fourth edition, contains the introduction by Joseph Fels, as well as the original letter of introduction to William Borsodi.

The author does not content himself with mere theorizing, but presents facts gathered from reports of the Department of Agriculture and other authoritative sources, together with results of his own personal experience. It is as interesting as a novel, and about the most practical exposition of the value of the "back to the land" idea that it has been our good fortune to read. He sets forth clearly, convincingly, even alluringly, the comfort, happiness and independence that can result from the intelligent cultivation of a small piece of land rightly selected. The book is sent upon receipt of one dollar, by Brains Publishing Company, Scranton, Pennsylvania.

"DER PIGMENTDRUCK"

A new edition of this excellent text book on pigment printing, by Doctor Paul Ed. Liesegang, has just been published and a copy sent us for review. This latest edition has been thoroughly revised by Hans Spörl, who has enriched it with many new additions, while further improving it by omitting portions of the original text that have become obsolete. New chapters added cover fully such topics as "Ozotype Oilprocess," "The Ozobromeprint," and "Bromide-Pigment Paper." All the essential points in the production of good results with these various processes are comprehensively set forth, and a discussion of the failures liable to occur add greatly to the value of the book. New illustrations showing such failures accompany the text and assist in making the matter more clear. The fact that it is used as the official book of instruction at the Lehr und Versuchsanstalt fur Photographie zu Muchen shows the high esteem in which it is held in Germany. The book makes a valuable addition to any photographic library, and anyone understanding German should not fail to procure a copy. It is published by Ed. Liesegang's Verlag, M. Egger, Leipzig, Germany. Paper covers, three marks; cloth bound, three marks, fifty pfennigs. We will be pleased to order copies for our readers at eighty cents and a dollar, respectively.

"VERBESSERUNG MANGELHAFTER NEGATIVE"

The above is the title of a book recently published in Germany which translated into English means: "Improving faulty negatives." A copy of this book has just reached us and we find it full of useful instruction in the line the title suggests. As long as negatives are made by our present methods there will be many which need improving in order to get good results in printing and any help in that direction should be welcome and appreciated. The author of this book, Dr. George Hauberrisser, has treated the matter in a clear and comprehensive way and, no doubt, those who follow his instructions will find a marked improvement in their work. Not only does he show us how to improve faulty negatives, but he also points out the causes which produce them and tells us how to avoid them in future.

This book should be a valuable aid to any photographer understanding German, and we would urge them to get a copy at their earliest convenience.

It is published by Ed. Liesegangs Verlag (M. Eger) Leipzig, Germany, and costs, paper cover, two and one-half marks, or bound, three marks. We will be glad to procure copies at seventy-five cents and one dollar, respectively, for those who do not care to order them direct from the publisher.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

HIRSCH & KAISER'S NEW CATALOGUE

Hirsch & Kaiser's new catalogue, containing one hundred and forty-four handsomely printed pages, is practically an encyclopedia of all that is desirable in photographic goods What is of still more importance, this enterprising firm has followed out its well-known policy of listing only such goods as it stocks ready for immediate shipment. It is an easy matter to get out a bulky catalogue, but to get out one as complete as is this, and one listing only goods actually carried in stock, reflects great credit upon the firm so doing. It is also a great convenience to the purchaser, who is too often disappointed at finding that goods ordered must be awaited until shipment can be secured from the East. Issued by Hirsch & Kaiser, 218 Post Street, San Francisco, Cal.

SUNSET ENDURANCE RUN

A Pacific Coast endurance run from Border to Border, Mexico to Canada, is to be held by *Sunset Magazine* the latter part of this summer or early autumn, conditions being favorable. To stimulate interest and insure the success of this event they will offer a handsome and appropriate trophy; through newspaper and poster advertising, obtain publicity; secure the co-operation of hotels, oil stations, etc., en route; and in fact organize the run on a basis similar to the well known Glidden and Munsey tours of the Atlantic Coast. It is believed that the time is opportune to prove the touring possibilities offered by this Western country and a tour held now will bring most beneficial results to all concerned. They therefore desire to start their Pathfinder from San Diego at an early date.

If you care to enter a car please communicate at once with Automobile Editor, *Sunset Magazine,* San Francisco. The entrance fee will not exceed fifty dollars, payable at a date to be announced later. They are prepared to place their own road mapping car in the field as the Pathfinder but should anyone else especially desire to avail himself of that publicity privilege, such a request will be considered if forwarded without loss of time.

AN OCEAN TO OCEAN ASSIGNMENT

D. Sargent Bell, head operator for William H. Rau, the celebrated scenic photographer of Philadelphia, started from Atlantic City June twenty-seventh, as photographer, with an ocean to ocean run, by the Premier Motor Car Company. He carries a 5 x 7 Graflex, using both plates and films, and a ten-inch Cirkut camera. He will develop and print as occasion requires and as the managers of the tour need the pictures for publication. The trip ends at Los Angeles, August tenth, if the planned itinerary is carried out. This is, perhaps, the first time that a photographer has been commissioned to photograph a tour of this kind and extent, and do so as thoroughly as Mr. Bell is capable of doing it. Mr. Bell's father, William Bell, was one of the first to make daguerreotypes in this country, while he himself has been associated with Mr. Rau since a boy. A better choice for so trying an assignment could not have been made.

WOLLENSAK PRODUCTS AT THE NATIONAL

The Wollensak Optical Company had a most complete exhibit of photographic lenses and shutters in their booth at the St. Paul Convention. The line included several new and interesting lenses and shutters. The Series II Velostigmat, F-4.5, recently perfected, is a remarkable lens, having all the good qualities of an Anastigmat. The three larger sizes are equipped with an ingenious device whereby the operator is enabled to obtain any degree of softness or diffusion he may desire. As this lens has a field that is absolutely flat, any diffusion introduced by means of the diffusing device will result in an equal diffusion or softness over the entire plate. This diffusion is by no means

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what is termed "fuzzy" and no ghosts, or double outlines result, as is the case with some lenses intended for soft focus.

A complete line of lenses for both the professional and amateur, including such well known ones as the Vitax Portrait, F-3.8, Series A Portrait, F-5, Versar, Series IV, F-6. Prints made from negatives taken with the various lenses of their manufacture, by some of the leading photographers of the country, were on exhibit. The good and bad points of each type of lens were shown in such a way that it could be readily comprehended. Several new types of shutters were also shown.

The Wollensak Company was represented by J. G. Magin, assistant secretary of the company; Louis W. Weil, traveling representative, and H. Oliver Bodine, manager of the new department for promotion of trade. This recently inaugurated new department is an original, distinctive idea having for its purpose the finding of new ways of creating business. It is for the exclusive use of dealers who handle Wollensak products, and their customers. The Wollensak Company, in creating this department, has made a move which should prove to the mutual advantage of all concerned.

A NEW HALL MIRROR CAMERA

An advertisement that our readers will do well to look up is the new one of the Hall Camera Company. There is a change in price of the 4x5 Mirror Camera, and also of the popular little Diamond Camera. Equally interesting is the announcement of the new 3¼x4¼ size of the Hall Mirror Camera. While not yet to hand at this writing, the firm advises that their new catalogue will be ready for mailing before this reaches our readers, and that it will contain a large number of interesting new pictures showing what can be done with these inexpensive yet serviceable cameras. Our readers should not neglect to send for a copy, it is free. Address: The Hall Camera Company, 14 Dunham Place, Brooklyn, New York.

THE NEW PAPER, ARTEX

We have recently been favored with some prints, portraits, made on grade B and C of the new Artex paper. They are certainly very fine, the stock is of beautiful texture, and the pearly highlights add much to the charm of the soft, delicate rendition of different textures throughout the faces and the drapery. The correspondent who sent them wrote that the paper is so easy to work that no one could help but make good prints on it. The secretary of the firm, writing from Columbus concerning their advertising in our pages, says that their whole force has had experience in the business and they have no excuse for making anything but a clean, marketable product that will advance the interest of the photographers. On the black-and-white grades one can obtain anything from cold blue-black to either a warm olive or brown, and on the sepia can be obtained any tone from a warm yellow through a wide range of sepias to purple, by the most simple manipulation. Our readers will do well to give this new product a chance to show what it can do.

DEATH OF MR. MILTON BRADLEY

It is with the deepest regret that we learn of the death of Mr. Milton Bradley on Tuesday, May thirteenth, at the age of seventy-four. Mr. Bradley founded the business so long known as the Milton Bradley Company, in 1860. In the field of education and trade his name has long been known and honored, and though the man has been called, his work lives after him, a lasting memorial to his ingenuity, nobleness of purpose and strength of character.

THE SENECA CAMERA

We are hearing a great deal of highly favorable comment on the efficiency of this year's models of Seneca cameras. These instruments have always ranked very high among those earnest photographic workers who really wish to accomplish something in their chosen field, whether it be for pleasure or profit. The demand for strictly first-class instruments of the character of Seneca cameras among these careful workers has had steady growth for a number of years, resulting in the greatly increased business of the Seneca Camera Manufacturing Company.

It is not entirely in principle that Seneca cameras excel, although some of their basic patents protect improvements of great importance in the field, but rather because of the extraordinary care which is taken in the manufacture of these instruments, the high quality of the materials used, and the equipment furnished in connection with them.

The 1911 catalogue of Senecas shows a

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wide variety of styles, incorporating every advanced idea of equipment. Whether amateur or professional, landscape or portrait worker, the photographer will do well to look over the Seneca line. Anyone can obtain a catalogue without charge by simply addressing Seneca Camera Mfg. Company, Rochester, New York.

BISSELL COLLEGE OF PHOTO-ENGRAVING

The College has just received some nice three-color work and an interesting letter from Juan Oswaldo Amat, of Guayaquil, Ecuador, student of 1908. He has charge of the engraving and illustrating department of *El Comercio Press* of that city, and makes it hum.

Mr. Geo. Saenz, who has just finished a course in photo-engraving and three-color work, has taken a government position in Guatemala, Central America, in the Bureau of Engraving. Mr. Saenz is only nineteen years of age but is a first-class workman in his chosen profession.

AN INEXPENSIVE BACKGROUND CARRIER

Attention is particularly called to the advertisement of the Ingento Portable Background Carrier in the advertising section. The illustration therein explains it quite clearly. It is a perfect ground, one that will add to the artistic merit of the home portraits, and this is mounted on an automatic winding roller, the support of selected hard wood with a rich weathered oak finish, fitted with trimmings in durable gun metal black. Set up, it is stable and solid, easily carried from room to room, and folds into compact bundle. It certainly fills a "long felt want," and it cannot help but have a large sale.

"CAMERAS FOR THE PROFESSIONALS"

There has just been gotten out a handsome catalogue having the above title and describing, with handsome illustrations to assist, studio cameras, multiplying cameras, copying cameras, enlarging, reducing and copying cameras, multiplying attachments, plate holder attachments, adjustable holders, wet plate holders, engravers screen holders, process cameras, background carriers, vignetters, and a few other requisites for the professional portrait man and the process engraver. Every professional photographer should secure one of these booklets. A copy will be sent free of charge by the Ansco Company, Binghamton, New York.

DEFENDER PRODUCTS IN LOS ANGELES

The Defender Photo Supply Company of Rochester, New York, takes pleasure in announcing the establishment of a branch office and supply station at Suite 200-209 Broadway Central Building, 424 South Broadway, Los Angeles, California.

This branch will carry a complete stock of our well-known Argo Developing, Disco Printing-out and Monox Bromide Papers; Vulcan Dry Plates, Chemicals, and Argo Soda, as well as a general line of photographic supplies.

The location of this branch is easy of access, being in the heart of the business section of Los Angeles, situated in one of the most prominent buildings, only one flight above the main floor, directly in front of the elevators.

Come in and get acquainted. This branch will be in charge of our Mr. M. L. Wolver, who will take pleasure in serving you in your photographic wants. Give us a trial, and be convinced that your patronage will be very highly appreciated.

BAUSCH & LOMB PROTARS WITH THE POLAR EXPEDITION

Under date of February seventh, a letter from H. G. Ponting, who is with Captain Scott on the British Antarctic South Polar Expedition, came out of the ice fields between latitude seventy and seventy-eight south, on the supply ship "Terra Nova." The letter, addressed to Bausch & Lomb Optical Company, Rochester, New York, says, in part:

"It is no joke photographing in these latitudes, and, moreover, the country is very lacking in beauty. I have got some fine studies of Mt. Erebus with the eight and one-half inch Bausch & Lomb Double Protar lens which you made for me. Curiously enough, the lens was lost as I was endeavoring to depict our surroundings with my 5x7 Reflex camera from the deck of the 'Terra Nova.' I had the misfortune to let the lens fall overboard, and it now lies on the bottom of McMurdo Sound in two hundred fathoms of water. This instrument was the finest and most useful lens in my whole outfit, and it has done a great deal of most valuable

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work in these regions. I want it replaced at the earliest possible opportunity; and, as Captain Scott's ship, the 'Terra Nova,' is leaving for New Zealand, to return here in January next, I shall be glad if you will have another lens made for me and send it to the New Zealand address which I am giving you on a separate sheet. It will then reach me in time to do a lot more valuable work before the expedition returns.

"I have done a very great deal of cinematograph work, and am sending back some eight thousand feet by the 'Terra Nova.' When this gets to America I would like you to see it. It shows practically all of our work to date, with some fine ice-packs, bergs, barriers, sledging, etc. We passed through one three hundred miles of pack, the heaviest, I am told, ever encountered on any expedition. Practically all of the photographic work done to date by me for Captain Scott's book was made by B & L. Double Protars."

J. S. BRULATOUR WITH EASTMAN KODAK COMPANY

J. S. Brulatour announces that he has terminated his contract with the Lumiere Company and accepted a contract with the Eastman Kodak Company as distributing agent for their moving picture film.

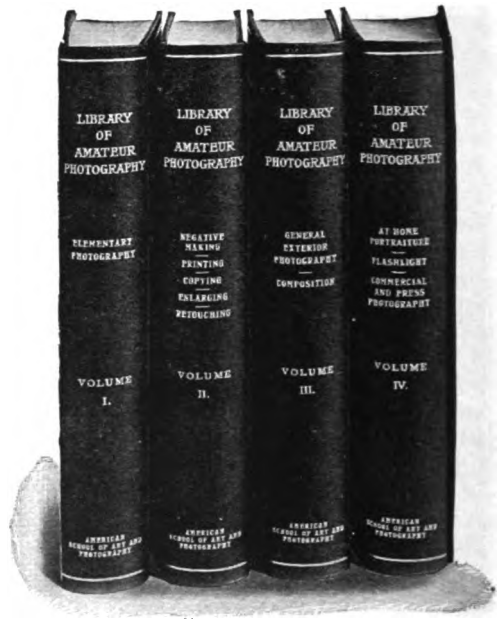
NEW VOIGTLANDER CATALOGUES

We have been favored with copies of the two new catalogues, one of Voigtlander lenses and the other of cameras made by the same firm. Both are interesting and instructive, well illustrated, and both are sent free by either of the offices, Voigtlander & Sohn, 240-258 East Ontario Street, Chicago, Illinois, or 225 Fifth Avenue, New York.

LIBRARY OF AMATEUR PHOTOGRAPHY

The attention of our readers is called to the two-page advertisement of the new *Library of Amateur Photography* in the front advertising section. There is being made a special advance application offer that should be given attention at once.

This set of books forms a library of sixteen hundred pages of vital photographic methods and ideas. It is a system of instruction that will not only save its cost many times over, but it will open up to the reader new photographic fields from which may be derived great pleasure and profit. In it one gets new methods of working, simple formulas for out-of-the-ordinary effects, short



cuts, and money saving as well as money making ideas. But do not put off the matter thinking you will get a set of the books later. Better investigate this "advance of publication" order plan before the special reservations are all taken. Cut off the coupon and send it in at once.

THE EURYNAR LENS

The Double Anastigmat "Eurynar" is a high grade, high speed, anastigmat manufactured by the Rodenstock Optical Works, at Munich, Germany; an institution reputed for its standard, high grade, optical goods. The Anastigmat "Eurynar" enjoys a large sale in all foreign countries, including Germany, England, Belgium, France, Italy, Austria, Spain and Russia. The Rodenstock Optical Works have agencies in the countries named, and are represented here in America by Messrs. Kreps & Stelling, of Augusta, Georgia, who report a rapidly increasing demand of the "Eurynar" in this country. The Anastigmat "Eurynar" is of German manufacture, imported, and is an objective well worth investigating by those desiring an efficient anastigmat at most attractive prices.

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FRISCO LINES OUTDOOR PICTURE CONTEST, 1911

The St. Louis and San Francisco Railroad Company offers a first prize of fifteen dollars, a second prize of ten dollars, and a third prize of five dollars, for the three best photographs of outdoor life in the Ozarks along the Frisco. In awarding prizes, the adaptability of the subject to their use will be considered equally with the technical excellence of the photograph.

Views of hunting, fishing, bathing, boating, canoeing and camping are particularly desired. Pictures of children in an orchard, a garden or a field, are also suggested as good subjects. Very attractive pictures may also be taken of chickens, sheep, cattle and other "life" around the farm. The rules of the contest are as follows: 1. Any subject may be used, provided it is taken in the Ozark Country tributary to the Frisco Lines. 2. Any one may submit as many photographs as desired. 3. Photographs may be of any size, but must be in black or brown finish. 4. Photographs may be unmounted or mounted. 5. The name and address of the contestant must be written on the back of each photograph. 6. The subject and location of the view, together with the approximate date it was taken, must be plainly written on the back of each print. 7. Prints must be placed in a sealed envelope addressed "Picture Contest—A. Hilton, General Passenger Agent, Frisco Lines, Frisco Building, St. Louis, Missouri," and sent by mail. 8. Contest closes November first, 1911. Photographs may be sent in at any time up to and including that date. 9. The names and addresses of the winners of the prizes will be posted in window of Frisco Ticket Office, Ninth and Olive Streets, on November tenth, 1911. 10. Photographs must be submitted with the understanding that they may be purchased at the price of twenty-five cents each if same is desired by the Frisco after awards have been made. 11. All photographs winning prizes or purchased, are to become the exclusive property of the Frisco Lines. 12. Plates or films of photographs winning prizes are to become the exclusive property of the Frisco Lines. 13. All rejected photographs will be returned after awards are made and prints purchased, provided sufficient return postage is enclosed with the photographs at the time they are submitted.

THE AGASSIZ ASSOCIATION TO VACATE ARCADIA

The Agassiz Association is requested to vacate its present premises, known as Arcadia, situated at Sound Beach, Connecticut, held by a gift lease for two years, from one of its members. It seems that the gentleman who provided the home for the Association during the last two years, did so with the expectation, as he wrote in a letter to the President, "that membership of the Agassiz Association in its various degrees would gradually increase; that subscriptions to *The Guide to Nature* would grow apace, and that, well within the period I had fixed for the experiment, the work would be on a sound business basis, suitably remunerating you and your staff for your labor." The last annual report of the Association showed that the president, Mr. Bigelow, had not only failed to receive any remuneration but that he and his family had advanced nearly five hundred dollars towards maintaining the Association. Upon receipt of this report the owner of the property wrote Mr. Bigelow that the experiment of two years had been a failure; that he had hoped that the good work might progress with the adequate compensation of what was termed the Bigelow family; that the Association seemed to have practically no assets, and that he desired the premises vacated at the convenience of Mr. Bigelow and his family. The letter closes by saying: "You have made a brave fight, and I salute you in honor, but the public has failed your support."

We are sorry to learn that the Agassiz Association is to be deprived of what has been its home for the past two years. The society is one that should have the support of the public if only to the end that the memory of its founder may be honored. Mr. Bigelow, its president, has our deepest sympathy. A contribution has been started towards the fitting out of a new Arcadia, and those interested in the Association and the work it represents can find no more fitting time than the present to come forward with such assistance as they can offer.

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ILLINOIS COLLEGE OF PHOTOGRAPHY

Professor Cook was suddenly called to his former home in Flint, Michigan, last month by the death of his father, James H. Cook, aged seventy-two. His father's health had been fine and his death was quite unexpected.

Wedding bells were gayly ringing last month for Rex. Munselle, student of 1910, and Joseph Cubbison, of 1908. The former, who has a studio at Santa Ana, California, was married to Miss Beulah Austin, of this city. Mr. Cubbison was married to Miss Carrie Frances Addis, of his home town, Sharon, Pennsylvania, where he is conducting a successful photographic business.

Professor C. W. Fisher has just returned from a summer vacation trip to various points in the Eastern States. He attended the Grand Lodge Convention of Elks at Atlantic City as delegate from the lodge at Effingham.

Nathan Housman, student of last year, has returned to finish his course in photography. We also received visits last month from former students, Carl Blakesly, E. J. Dempsey, Herbert Sullivan and others.

Frank Champion, student of 1905, visited the college for a few days on his way home from London, England, last month. Mr. Champion has a profitable photographic business at Long Beach, California, and has been abroad attending the Bleriot School of Aviation. He has an interest in a Bleriot monoplane, and during the flying seasons will make exhibition flights. Some photographers are pretty high fliers when they get away from their studios but we do not believe they will have anything on Frank, when the weather is good.

LEARN ABOUT CALIFORNIA

"California Resources and Possibilities" is the title of an eighty-page book of unusual merit that has just come off the press.

The appendix, occupying about twenty pages, contains articles furnished by writers of recognized standing which are of great benefit to homeseekers. "The Climate of California" by Judge N. P. Chipman is illustrated by a full page picture of Madame Tetrazzini singing in the open air at Lotta's Fountain, San Francisco, Christmas Eve. Others are "Irrigated Agriculture—The Dominant Industry of California," by Samuel Fortier; "Educational Facilities," by Robert Furlong, and "The Call to the Immigrant," by Col. John P. Irish. Inside the back cover is a large folded map of the State arranged to show the products of each section.

The real subject of the book, "California Resources and Possibilities," is told in statistical articles under the subheads. "Growth and Development of the State," being a resume of reports from the thirteenth census and is of a comparative nature. "Density and Distribution of Population" are given by natural sectional divisions, by counties and by cities. Copies may be obtained, free of charge, by addressing California Development Board, Ferry Building, San Francisco, California.

BRAMSON NOW OWNS THREE

O. A. Bramson has purchased the Photo Post Card Shop, at 603 Sixth Avenue, Des Moines, Iowa, making his third place in that city. He is owner of the Iowa Photo Postal Company, in the Fleming Building, and the Capital City Studio, at 417 West Walnut Street.

REPORTED BY WILLIAM WOLFF

F. B. Howland, the air-brush man, who lost everything in the Chutes fire, has again started in business at 1530 Fillmore Street.

C. C. Green and wife, of Marysville, were in the city two weeks during July.

Harold Parker and wife, of Pasadena, stopped off in this city on their way to Lake Tahoe.

Charles Johnson, who was burned out in the recent Chutes fire, is still making pictures. He has a new studio at 1028 Market Street, this city.

Mrs. E. Merriman, of the Hartsook studio, has just returned from a month's sojourn in Southern California.

J. Mandl, of Honolulu, is in this city looking for a studio location.

William Wolff starts on his fall trips August first.

Mr. Seyler, of Tapprell, Loomis & Company, is expected on the Coast some time in August.

The Hedels Studio, on Fillmore Street, has changed hands, Mrs. De Silver being the new owner.

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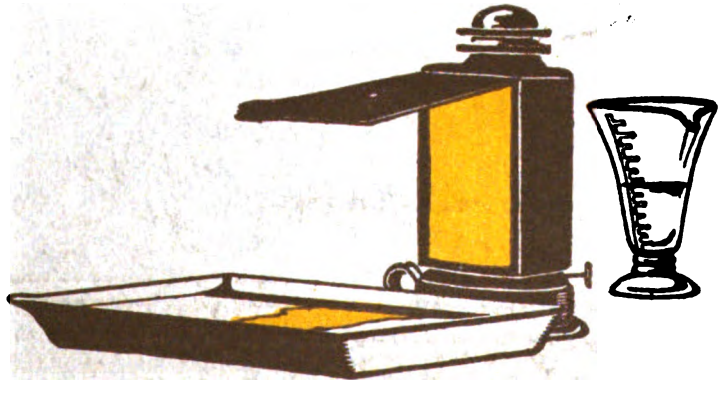
Vol. XVIII No. 9 SEPTEMBER, 1911 Price, 10 Cen

Camera Craft



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SAN FRANCISCO CALIFORNIA

An arbitrary statement claimed as a fact, but unsupported by proofs or reasons, has ever been resented by the people as an offense to their intelligence.— FRA MONTE.

CYKO proved its quality first by a long and steady record of success in the hands of the leading photographers of the country.

CYKO users then submitted the printed evidence at National and State Conventions that has made CYKO famous.

A single proof is worth a page of unsupported claims

Ansco Company Binghamton, N. Y.

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GOOD MORNING
By FRED E. CRUM

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

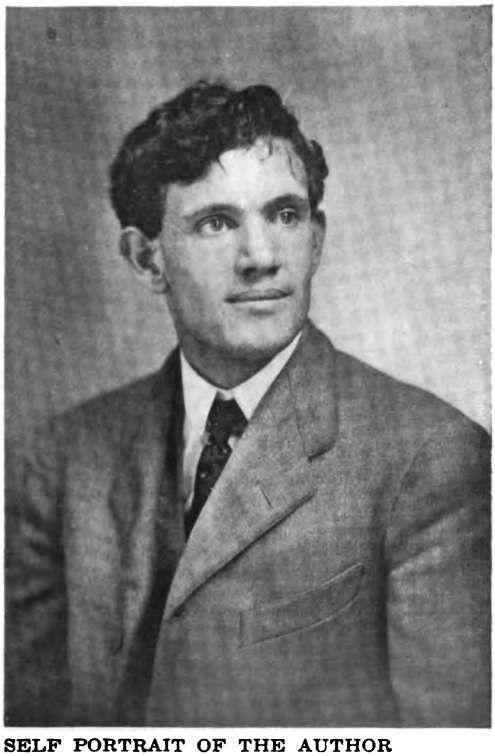
CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII SEPTEMBER, 1911 No. 9

Learning Photography From The Magazines

By F. E. Crum

With Illustrations by the Author



SELF PORTRAIT OF THE AUTHOR

How the photographic magazines taught me a profession, my experience in starting and conducting my first studio, and some advice to others about to embark on their first venture as professional photographers, may be of interest to the readers of CAMERA CRAFT. The editor has assured me that such an article will be most welcome. Such a one would certainly have been most welcome to me a few years ago.

At that time, when only a boy, I was taken very ill, sent to a hospital, and a few months later sent home to die. There I was carried, seat and all, outdoors every day; and I used to read a great deal, although I tired of it quite easily until I got hold of a photographic magazine one day. I had a cheap box camera, the photographic articles interested me deeply, and I read that magazine until I knew it all by heart. After that, I read everything on photography that I could get hold of, even though I could not take a picture. After many months, when I got so

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I could stand on my feet a little, one of the first things I did was to take a picture. I looked over sample copies of the different magazines and decided upon one now out of existence as best for my purpose, and my purse, as I could afford only one, and hardly that; but I was wrapped up in photography and had to have something to keep my mind off my illness. I read every copy through and through, advertisements and all, until I could lay my hand on every bit of information they contained. I sent for all the catalogues and read them through in the same careful manner, and it is unbelievable the vast amount of information they contain.

As I began to get around a little and work out and apply what I had learned through my reading, I began to take quite good pictures; and I naturally thought that perhaps I could make a little money. But as my simple little box camera was not capable of a very wide range of work, I sold a good wheel which I happened to have, and which I did not dare to ride while in my condition, and bought my first good camera. I was too ill to get around much, but I made money; not a great deal at first, but yet enough to encourage me wonderfully. My work improved right along, and all due to the magazines, because I had no one to go to with my troubles, having to work out everything myself with only their assistance. I cannot praise them enough, as they have taught me all I know. And I am more than grateful to the editors for their help and their criticism of my pictures, this last being particularly valuable in helping me to improve my work. Although I have been a full-fledged professional for over a year, I still ask them to criticize my pictures, and find their doing so a great assistance. Some magazines have a department for such criticisms, others do not, but the editors of the latter always seem willing to criticize by letter, and that is still more helpful.

I believe the average reader of a photographic magazine fails to derive more than a fractional part of the benefit he might, did he read them as he should. I was a good reader, read each copy through from cover to cover, and the articles that appealed to me most strongly I read over until I knew them by heart. The result was that when I went about anything, I knew just how it should be done. I had to work under the greatest difficulty. I had to wait at night until all the others in the house were through with their duties before I could do any dark-room work, and then it was quite late. I was not allowed a room to myself, as my photographic work was looked upon as a nuisance. I could not attempt portraits indoors, as the only available room was at my disposal only on rare occasions and I did not like to disarrange things with my work in such bad repute. I did not have the strength to build a place, or the money to provide the material, with the result that I had taken only about twelve indoor portraits previous to opening my studio. Despite the little practice I had had, my studio proved a great success, a success far beyond my expectations, and I made more money than I ever dreamed was possible for one in my condition.

One of the greatest helps I received, and one that had the most to do with my success, was a series of articles on portraiture for professionals and amateurs, contributed to *Western Camera Notes,* now incorporated with this

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UNDER THE SKYLIGHT

WHAT THE SITTER FACES

magazine, by Felix Raymer. I wish I could meet that gentleman and thank him personally. While I had, at that time, no place to practice his instructions, I read each one until I had it so fixed in my mind that when I came to make portraits in my studio I knew just how to go about every part of the work. I was doing outside work those three or four years, mainly that I might be outdoors as much as possible; but, as I could not cover much ground, and therefore could not make much money, and as my health did not seem to improve greatly, I decided to see if I could run a studio.

I heard that a photographer in a town about four miles from my home would sell, but he wanted a good price. I looked over the situation and finally bought him out. I paid the price, having to borrow most of the money, but this last I paid back in three months from the profits of the business. The former owner stayed with me a week in order to coach me on the business end, and that is all the photographic help of a personal nature that I have ever had. So my advice is, pay a good price for a business, but look it over and see that it is worth the price. Mine is a one-man studio in a town of only about four thousand inhabitants, but I draw from six other small towns. The town is the one in which I worked at the railroad station as a boy, and, consequently, I know nearly everybody here and throughout the county. So a further piece of advice for the young man is to start where he is known and in a town so small that it cannot support another photographer, even if he does have to pay a little more than the business is really worth. My wide acquaintanceship has been a great help and has made it quite easy sailing for me. If it had not been so, I could not have paid, in the three months, what I had borrowed. If one is well acquainted and does good work, no matter what it is and no matter whether dear or cheap, and if he will keep only good company, he will succeed. One should make it a point to attend every function possible that is given in his small town where good company is present. I do this whenever my strength permits and only regret that I cannot do so more, as it is a great help to be acquainted with as many of the right people as possible. Too many professional photographers either fail to associate with their fellow townspeople or else choose the wrong element as their associates. One

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PICTURES ARE GREAT SPORT

A SERIOUS-MINDED MAIDEN

must do the best work he can and always strive to improve upon it, by constantly seeking criticism of his work from those who know.

My work ranges from the cheap ping-pongs to pictures at twenty dollars or more a dozen, with all kinds of view work. I do not go out of town for less than five dollars and expenses. There is good money in view work, and I find it easy after my three or four years' experience at it alone. One will find that being a country photographer involves photographing almost everything from the testing of some electric lights to the cutting of ice. However, I rarely make a mistake, as I always remember what I have read on any given subject and know just where to find the article that will assist me. My magazines have helped me through many a tough job. When I get one that I am at all dubious about, I look for an article on something similar in my back numbers and study up the subject. And after every such job I note down all the details in a book kept for the purpose, with the result that a like job at some future time is made an easy matter.

I use an 8x10 studio camera and find it large enough for such work as the town demands. My lens is one that was made in France, one that gives nice, round, soft portraits requiring hardly any retouching, and yet portraits that are sharp enough. If one is busy in a one-man studio in the country, he does not have time to do a lot of retouching. I would therefore advise a soft-working portrait lens as being, under such conditions, the superior to an anastigmat for portrait work. I believe in having plenty of backgrounds, as it makes it easier to get different effects. I have eight arranged one behind the

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AN EFFECT IN DRAPERY

THE PICTURE MOTHER LIKES

other and in such a way that one is taken down and another put in its place very quickly. One of the best things to have about a small studio where one cannot work all around the light is a light controller. With it I can make practically any style of lighting, including Rembrandt and line effects, despite the fact that my light has no curtains. I have not felt like going to the expense of these last, having just started in, and very few people care for the shadow effects. I really have very little use for curtains while I have the controller. Personally, for artistic work, I prefer an ordinary window, even if it be only two and one-half feet square; and, if my operating room were large enough, I would have such a light in addition to the skylight I employ.

I found about the hardest thing to learn, when starting to work in my studio, was to make pictures but to please my customers, not to please myself. It goes against my grain to let some pictures go out with the poses as they are, but I cannot do otherwise than make them as the sitters request, after my advice has been declined. I am in the business for the financial reward it gives, and to get it I must please my sitters. In a country studio, one has every class of people to deal with, and it is difficult, at first, to find out just what kind of picture is wanted; some want the faces quite white, while others, those that appreciate good work, want tone values in the faces. I remember having to have an enlargement, for which I was to get fifteen dollars, made over because the retouching had softened the lines, the customer complaining that all character was lost. That customer was right, but the next one would have wanted it just as I had it; so one must, with such a variety of customers, find

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out just what each one desires before going ahead with the work. I try to size up my customers, beginning to study them the moment they come in; and, in talking about price, style, sizes, etc., I take all the time possible without their realizing it. The girls and young ladies I found I was handling in the same manner as Mr. Ray advised in his article in the August, 1910, issue of this magazine. When I read that article, I was pleased to find I had been doing that part right, although I had only had my studio about three months. These young ladies I generally jolly along, of course, in a gentlemanly and refined way, and I succeed in getting good expressions. Immediately after they relax and laugh at some bit of drollery, they have a pleasant expression that is quite natural. Even with my male subjects, I can get a good expression in the same way.

"MUST I REALLY LOOK PLEASANT?"

A silent shutter is a necessity and I would not be without one for a good deal. One can keep right on talking to his sitter, watching for the right expression; and, when that is observed, take the picture without the sitter's knowledge. I never even let the bulb show as I operate from behind the camera. I love to laugh and tell the sitter that I am all through when she thinks I have not yet taken a picture. I make a practice of always being on the lookout for poses wherever I go, at the same time observing the figure to which the pose is suited. I have done this ever since I started to take pictures, and it has grown to be a sort of hobby with me. I also study the different light effects on the faces around me. I can sit for hours in a place like the railroad depot at Jersey City and study the faces as they pass. I study, as I go to my studio, the graceful and unconscious poses of the children that I meet on their way to school. Doing this, when I feel like making some studies for myself, I can easily pick out a

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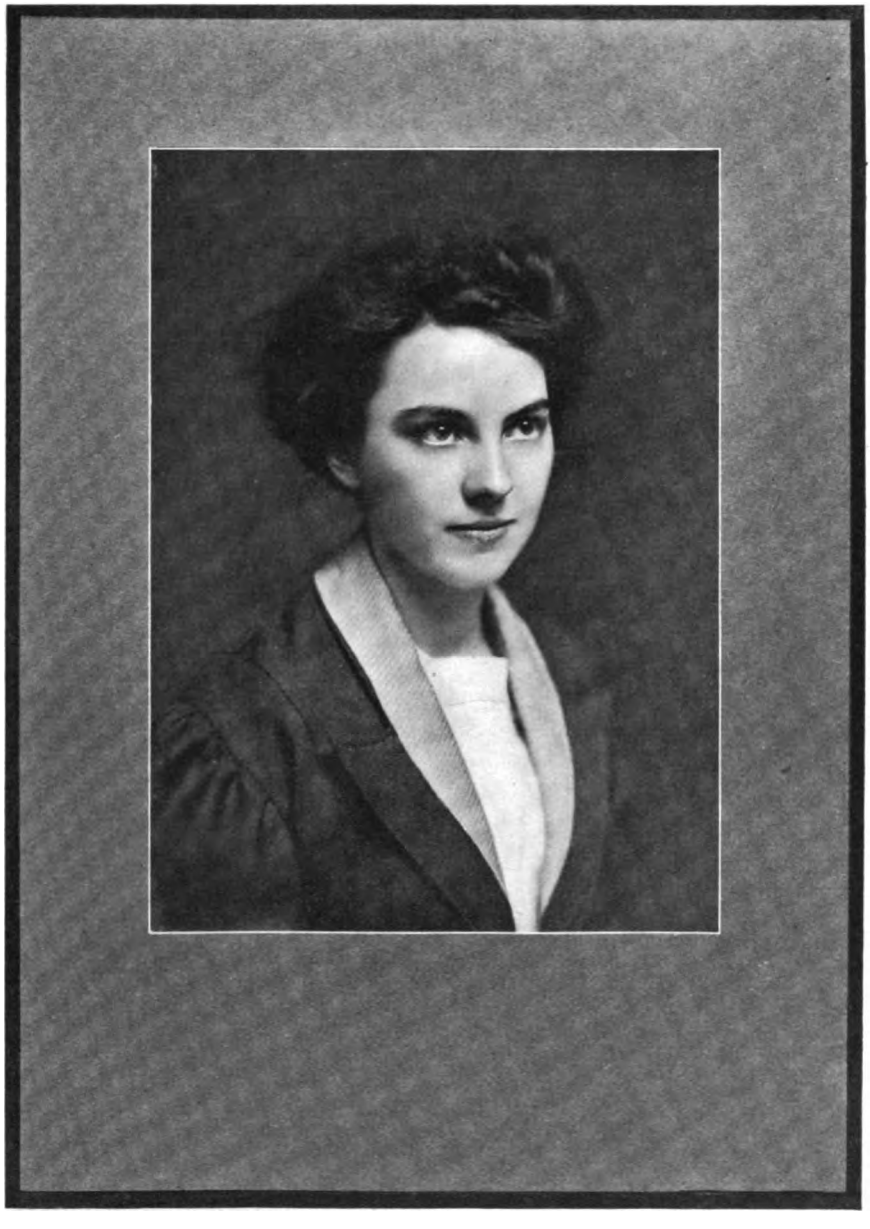

A YORK STATE LASS

model, as I did recently, and perhaps you will see her picture as one of those the editor selects to illustrate this article.

I have been doing all my developing in a tray, fearing to trust exposures ranging from one-eighth to four seconds, to a tank; but I am experimenting with the latter. I must save all the time I can, as there is not enough business to make it possible to hire a good man. I have a boy to help me now and then,

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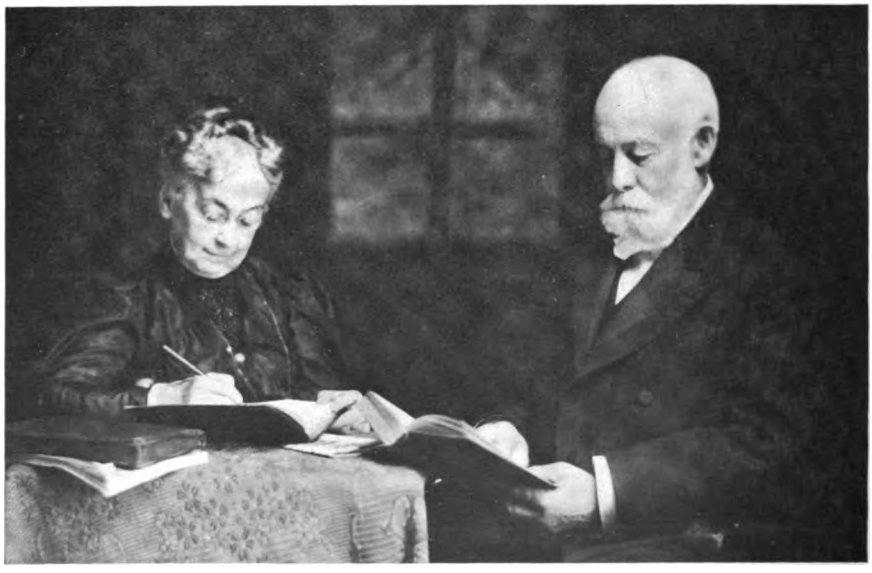
and sometimes one of my sisters assists during a rush period, but even then I have to do most of the work myself. I have to economize my strength and avoid being on my feet any more than is absolutely necessary. I use nearly all kinds of papers, according to the grade of work being made, but I will soon have to confine myself to the developing papers, not having the time required for the others. I like platinum, particularly for my best work, but I find I can get very fine effects on some of the developing papers. I do a great deal of work and experimenting in an effort to get just the results I want; but, when I get them, I adopt the method and work that in the future. In so doing, I am gradually eliminating and reducing my work to a system, and that means economy of time and labor.

I believe in getting everything possible in the negative, and in that way avoid all the time-consuming after manipulations. I used to do considerable local reduction on my negatives and dodging in the printing, but I now rarely have occasion to do more than make straight prints from the negatives, just as they come from the drying rack and after being slightly retouched.

I do not believe in being stingy with plates. One should always try to please his customers, and, in taking a few extra plates, the sitter always realizes one is trying to please and will take pains to recommend him to his friends. Just recently I used six plates on an order that was to have been for only a dozen post cards, but in doing so I secured an excellent negative of a very restless child,—and an order amounting to fourteen dollars. Chemicals should be of the very best and bought in as large quantities as their keeping quality will permit, as they are much cheaper that way. Mounts should be bought in small



The original print showed a plain dark background and one of Mr. Crum's critics advised that the space between the two heads needed something to break it up. The suggested window was put in on the glass side of the negative, whereupon the same critic complained that it was spaced too equidistant. Mr. Crum then obligingly moved it to the position shown in the next illustration. It will be seen that the last is a decided improvement over what the original print must have been with almost an entire lack of atmosphere and the gentleman's head strongly silhouetted against so solid a background.

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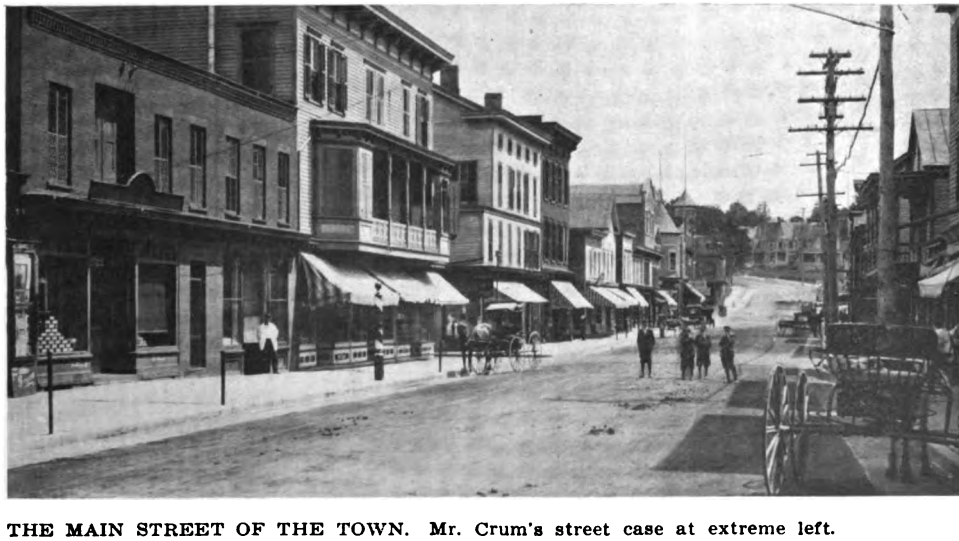
A PICTURE FOR THE BOY OUT WEST

quantities so that the styles can be changed quite often. The aim should be to keep the work up to date, and then, no matter where the people come from, they will remark on their surprise at finding work in your small town that is just like that that they have seen in such-and-such a large city. And, besides, the better class of trade in your own town will be less inclined to go to the large city for their best work, as they too often do in many small towns. They will come to you and their coming will give you more business from their



THE MAIN STREET OF THE TOWN. Mr. Crum's street case at extreme left.

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friends and those others who always like to do what they find the leaders in their set doing.

I am certain that the man running a small studio in a small town has a great advantage over the city photographer if he will but make good work. And there is no good reason why his work should not be better. He personally knows nearly all of his sitters; he has an opportunity of studying their likes and dislikes, their poses and mannerisms, before they get under the light. In the city studio, a receptionist takes the order, often with little other information than the amount the patron is willing to pay, and then the operator sees the sitter for the first time as he or she walks under the light. The combination may result in some very striking poses, some very excellent pictures, but they may be a long way from what the subject really wants.

I believe that any young man, particularly if he has good health, can succeed quite easily if he but have a love for the work. All that he has to do is to study hard, watch his chance, and when it comes, jump for it. I enjoy photography; and, were I in good health, I would never tire of it. Even the continual pain that I suffer does not rob the work of its pleasure for me. And I must urge my readers to profit by the wealth of information furnished by the good magazines on photography. They contain much information that is not published in books, and they will keep one in touch with all that is new in the business. I know there are hundreds of photographers who do not read them, but talk to one of them and you will find that they are not well posted. As in any other line of business, the successful ones will be found reading all the magazines of their craft or profession. So I can best close this rather lengthy article by advising the ambitious young photographer to take at least one good photographic magazine and read and digest its contents thoroughly. The back numbers of a magazine like CAMERA CRAFT, for four or five years, would, if given close study, equip any young man with a better working knowledge of photography than is possessed by many of the average professional photographers.

"Beauty abides, nor suffers mortal change,
Eternal refuge of the orphaned mind;
Where'er, a lonely wanderer, I range,
The tender flowers shall my woes unbind,
The grass to me be kind;
And truly shapes innumerable shall throng
On sea and prairie, soft as children's eyes,
Morn shall awake me with her glad surprise,
The stars shall hear my song,
And heaven shall I see, whate'er my road,
Steadfast, eternal, light's impregnable abode."

—GEORGE E. WOODBERRY, in *The North Shore Watch.*

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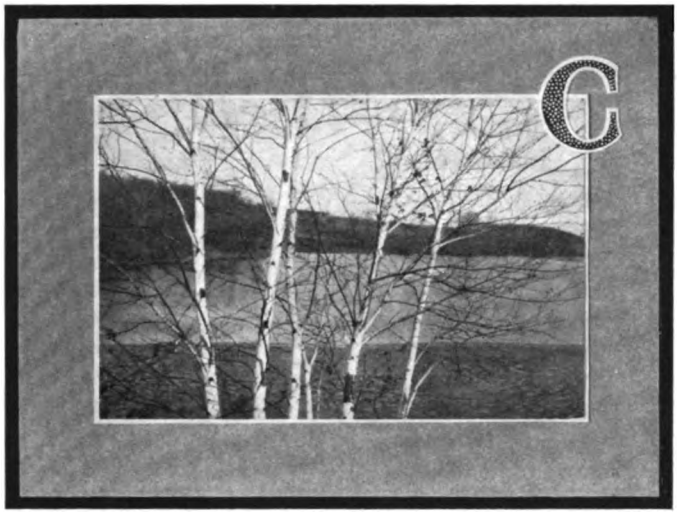
Simplicity In Pictorial Composition

By H. Oliver Bodine

Illustrated by the Author



"THE TREES ARE ALL QUITE SMALL"

COMPOSITION, as related to the arrangement of the lines and masses, of lights and shades, even of the objects that are included in our photographic pictures, is much too broad a subject for me to attempt to handle in a brief article like this, even did I feel competent to do so. But, it has so often been forced upon me, the seemingly quite determined effort of the average amateur to include as many points of interest as possible in his pictures, that I am constrained to enter a protest in behalf of simplicity. So many otherwise excellent examples of pictorial photography are made almost worthless by being too complicated in their composition, and by this I mean they are made to contain several points of interest, whereas, there should be but one.

In my regular work, I have handled many negatives, the work of others, and in doing so, found, almost every day, one or more that carried wonderful possibilities along pictorial lines; but the maker had denied himself the study and forethought that would have made them possible Salon entries. Often a liberal use of the trimmer was all that was required. Let me give an example in point: Recently, in examining the work going out of an enlarging department ready for shipment, I discovered a pretty landscape made from a 5x7 negative. As a whole, it was a pretty, record photograph; nothing more, as it contained at least six points of interest, all of about equal value, as far as prominence was concerned. I returned the negative to the enlarging room, had several enlargements made, and from them, using a little thought, my pasteboard triangles and a trimming board, succeeded in getting two very beautiful

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"SIMPLE MATERIAL AND SIMPLICITY OF COMPOSITION"

and artistic pictures and three of lesser value, but better than the original whole, and all from the one original composition.

In making photographic excursions afield, I always endeavor to find bits of landscape that can be composed on the focusing screen in such a way that a tree, a farmhouse, a rail fence, or some one object, would stand out from the rest of the picture; in other words, so arrange the picture that one object would predominate. To do this often requires a certain lighting, a lighting that will bring out the desired object and subdue the rest, as the wrong lighting will frequently emphasize an entirely unimportant feature and so subdue, through the wrong placing of lights and shadows, the object that it is desired to endow with the post of honor, the greatest prominence. One should always await the proper lighting before making an exposure, even though another trip to the place is made necessary, even though several may be required. Early morning and late afternoon are my delight, for then the shadows are long and

"MANY SHOULD HAVE HAD DIFFERENT ATMOSPHERIC CONDITIONS"

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"SIMPLY A FEW BIRCH OR WHITE BEECH TREES ALONG THE RIVER"

atmospheric conditions more conducive to pictorial results. And one should try taking a few pictures against the sun. Books warn one against so doing, but make a few exposures that way and study the results. Do not understand me as advising you to set up your camera with the sun shining directly into

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the lens, for that would be folly; but, on some morning or late afternoon trip, expose on a simple bit of landscape with the shadows all falling towards you. If the sun shines into the lens, move the camera into the shade of a tree or hold the slide over the lens in such a way that the direct rays do not reach its surface. Give a reasonably fast exposure, develop in the ordinary way, and I am quite sure you will be agreeably surprised at the results.

I have been waiting patiently for three years to get a certain picture that I have had all figured out in my mind for that length of time. Let me picture it for you: A few daisies, only about nine or ten blossoms, growing alongside a rail fence or stone wall; in the distance, a few trees to relieve the sky line; time, early morning with shadows from the fence or wall; a little fog or atmosphere, and the focus well on the daisies and the distance taking care of itself. I have taken trips through the country surrounding our city, for three years, hoping to get my picture; but one year we had abundance of nice daisies, but no atmosphere on my morning trips; the next year, fine mornings and atmosphere, but daisies not to be found; while last year there were, apparently, neither daisies nor atmosphere. Next year, I am in hopes of encountering the only other possible combination, daisies and atmosphere both. I have located several bits of fence and wall, all with suitable backgrounds and ideal sky lines, and only await the arrival of spring. When I finally do succeed in getting my picture, the fact that I have waited so patiently, and tramped so many miles in search of it, will but add to the pleasure I will derive from securing a negative that will give me the picture that I have so long had in my mind. And I have gone into the matter of this picture simply to show the reader that my own desire is for a certain picture that is simplicity itself. I am not dreaming of a trip to Niagara Falls or Yosemite Valley; at least, not for the purpose of making pictures. While the artistic worker could, no doubt, make pictures of these wonders of nature that would be more artistic than the regular views on sale, they are not the best class of subjects for pictorial work.

The prints which accompany this article are all from negatives made on one afternoon trip, taken about the middle of March, to the river which runs near our city. As can be seen, the trees are all quite small, they were bare of leaf, and they did not border a pretty roadway that could be used as a foreground. Aside from the pictorial quality of their white trunks, with here and there dark bands where the bark had been removed, they were simply a few birch or white beech trees along the bank of a somewhat uninteresting stream. In fact, they were just such material as the average searcher after views would pass without so much as a thought. In taking them, I had no particular object in view other than that of making a set of negatives that I might use, some day, as a means of convincing some beginner in pictorial work that simple material and simplicity of composition were a subject worthy of consideration. The examples are not all pictures. Many of them should have had different atmospheric conditions, some could be improved by trimming, others would have been better had I had a choice of different focal lengths in lenses. But I think they will compare favorably, as pictures, with work that aims to portray more beautiful and complicated scenery such as the beginner feels he must search out.

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In closing, let me urge you to try for more simplicity in your compositions, forgetting for a time the bird's-eye views and the expansive landscapes that charm the eye with their variety of material. And guard against the charm of color that is so misleading to the eye that forgets that the photographic rendition is to be a monochrome one. It can almost be laid down as an axiom that the more simple the subject and the more simple the treatment, the more successful will be the result; at least, where pictorial photography is concerned. If these few pictures and these few lines have but caused a few of my readers to give the subject a little thought, I am well repaid, and I thank you.

DECORATIVE PORTRAIT — By SARAH HOLM

The Thirty-first Annual Convention of the Photographers' Association of America

The St. Paul Convention is, like its thirty predecessors, a thing of the past. It was a rousing good convention. It is generally conceded by those in attendance, who were in a position to compare it with others, to have been the best convention held in several years. The list of exhibitors numbers over sixteen hundred names, not counting the special exhibits. These last included a loan

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exhibit by the Photo Secession collected by William H. Rau, of Philadelphia, Duhrkoop's complimentary exhibit, one by Libby Art Studio, of Spokane, and three exhibits of Indian pictures by E. S. Curtis, Fred Monson and the Sweet Studio, respectively. All of these exhibits were interesting and formed quite a center of attraction. The list of attendants numbered over twelve hundred, and possibly many names were not recorded or recorded after the list was made up. The manufacturers were in attendance in force, with displays that showed the benefit of previous experience.

The Armory, an ideal place for the holding of a convention, was most tastefully decorated; the plan of having a uniform color for the backgrounds and panelings was a most admirable one, one that will no doubt be carried out in future conventions. There were no awards or prizes of any kind, this year, and it was generally conceded that so doing had much to commend it, eliminating as it did that jealousy which is almost sure to result when a prize is offered and there are competitors in any number or even a few of fairly even standing. If there was the least shade of dissatisfaction, it could only have been entertained by the manufacturers on account of the continual well-directed efforts of those entrusted with the entertaining of the members having the effect of monopolizing the attention of those in attendance. But no such dissatisfaction was expressed.

The Duhrkoops were well received and were the center of attraction from the time they arrived until their departure. They are, beyond question, wonderful workers, having a control over the lighting and modeling that seemed almost superhuman. And this in spite of their absolute refusal to employ head-screens and other stock accessories of the conventional studio. In the place of these last, they employed pieces of ordinary cardboard, paper, and the like. Their demonstrations were interesting and instructive in the extreme and were alone worth the trip of the most distantly situated attendants.

In the matter of locating future meeting places, it was suggested that the country be divided by an imaginary line running north and south, conventions to be held alternately in the two sections so created. Philadelphia was selected as the location for the next convention. This will take the 1913 convention to the West, the 1914 one to the East, bringing San Francisco into line as the logical location for the convention at the time of the holding of the Panama-Pacific International Exposition. This last, of course, depending upon the presentation of such claims as made for the consideration of a location so far removed.

The election of officers for the following year resulted as follows: President, Ben Larimer, Marion, Indiana; First Vice-President, Charles F. Townsend, Des Moines, Iowa; Second Vice-President, Will H. Towles, Washington; Treasurer, L. A. Dozer, Bucyrus, Ohio, and Secretary, Manly W. Tyree, Raleigh, North Carolina. All are experienced convention workers and no doubt need be felt concerning the enthusiasm and good management that will characterize the next gathering of the members of the Photographers' Association of America.

Artist: "Madam, it is not faces alone that I paint, it is souls."

Madam: "Oh, you do interiors, then?"—UNIVERSALIST LEADER.

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Using A Kodak At School

By Lois M. Clency

Illustrated by the Author

"Through College With a Camera," in the May issue of CAMERA CRAFT, prompts me to offer my own experience, although on a less pretentious scale, along the same lines. There are, no doubt, not a few readers of this magazine who might profitably engage in like work, and for their benefit I will attempt to set down a few of the things that have been taught me by my three years' experience with a kodak at school.

"THAT BASEBALL STAR"

To begin at the beginning, although I have been familiar with kodaks and kodak work ever since I can remember, when I was presented with a camera at the close of my freshman year in the high school, I was really quite a novice at the work of actually taking a picture. But I got acquainted with my kodak during the summer, and also with the fact that it costs something for films and supplies. It was learning this last, not the accidental making of a good negative, that was responsible, in my case, for the making of a resolution to take some pictures that would sell to my fellow students, and in that way make my camera self-supporting.

This first camera was not the ideal one for "commercial" work, being of the simplest box form, and making a picture only three and one-half inches square. But I managed to have some picturesque new views of the high school already printed on one end of some post cards when the new term began, and they sold well. That time of year, I found out, was the ideal season in which to offer such views, as the new students want them to send to their folks and their friends to show them where they were. I further learned that the most advisable method of selling my cards was to take definite orders from a sample rather than print a number on the chance of disposing of them.

That first year I did not do very much work, but my camera paid for itself, its running expenses, and all of my school supplies, and provided me

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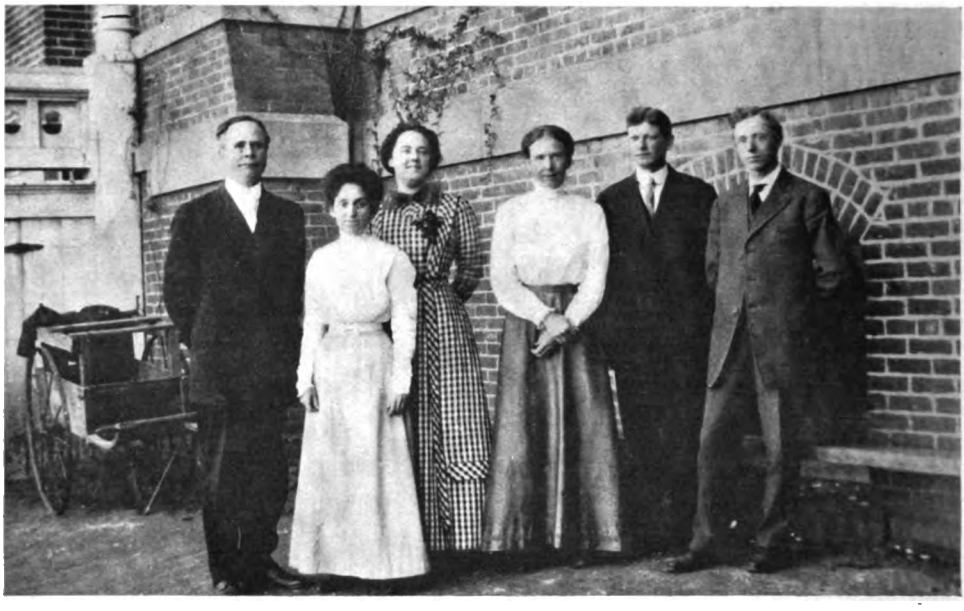

"A GROUP PICTURE OF THE FACULTY"

with a little extra spending money for good measure. I had learned how to use the camera and what to use it on. A picture of about twenty of the pupils who had been picked up on the road to school by an express wagon one morning, proved to be an excellent seller, although it was not a perfect picture. A group picture of the faculty and another of the senior class were the other "best sellers" that year.

The work done the next two years was better, both in its photographic quality and its selling properties. A picture of the basketball team, brought out soon after the team's best game, was very much in demand; while the picture of the mascot of another team, brought out a little late, had absolutely no sale. A picture of my own class, taken immediately after our jolliest senior frolic and when interclass rivalry was at its height, was exceedingly popular—every one had to have a copy as a souvenir.

By this time I had added a Brownie No. 2 and a Folding Brownie No. 3A to my equipment. "But you can't use three at once," my friends told me. But I could rent out three at once, and often did so; for, when one class holds a picnic, the other classes do the same, and there must be pictures taken at each. In fact, the finishing of pictures that had been taken by others using my cameras has been the larger part of my work since graduating last year.

Yes, I know the Brownie No. 2 is too small for pretentious work, but it is just the thing for taking pictures of that baseball star in his new suit, or the captain of the girls' basketball team. It gives the kind of pictures they want, the kind that their spending money permits them to buy. The pictures are not finished in studio style; in fact, none of my work is so finished; and the students do not look with favor upon examples of "fuzzygraph" work, demanding clearness, good definition throughout, and good black-and-white prints.

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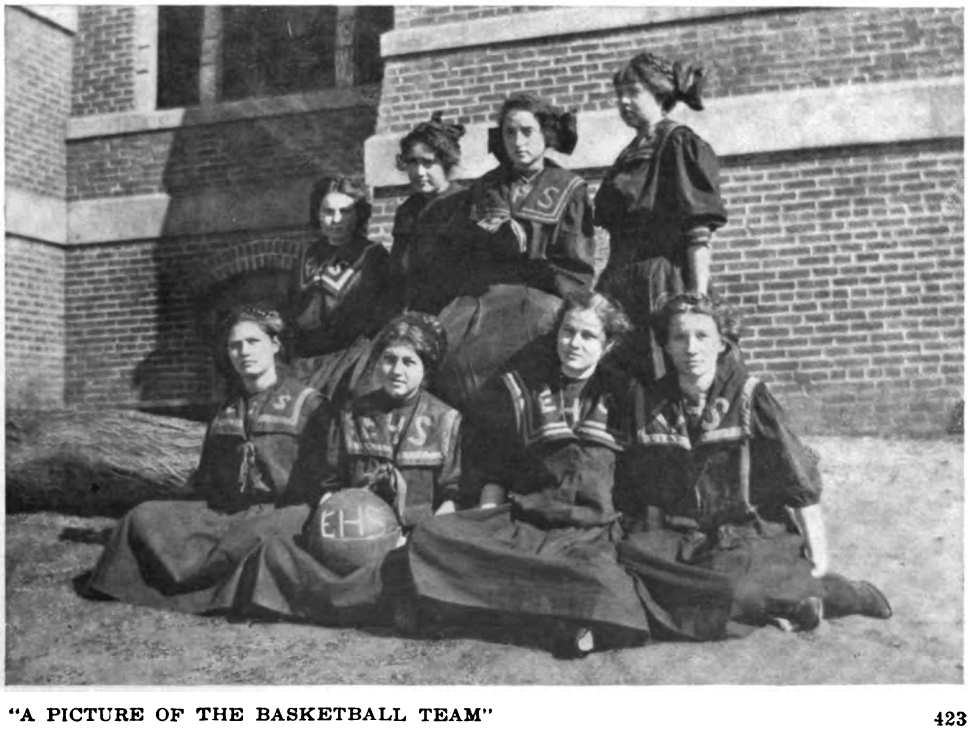
"A VIEW FROM THE FAVORITE PICNIC GROUND"

Failing in any of these last requirements, a picture is at once classed as "no good," and the negative might just as well be thrown away, preferably before a print is shown and one's reputation needlessly injured thereby. And one must remember that each print is an advertisement and that the students



"A PICTURE OF THE BASKETBALL TEAM"

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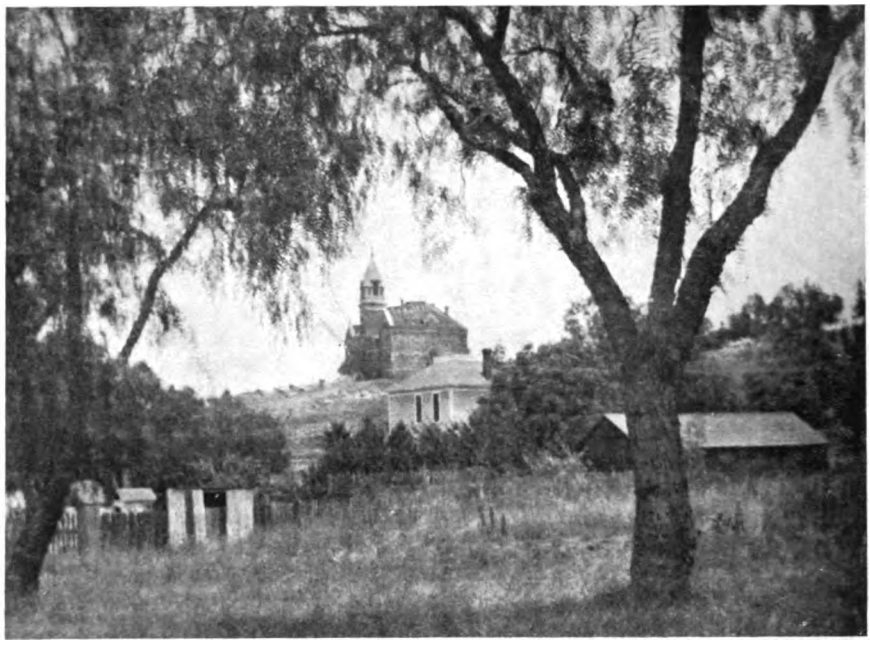

"A PICTURESQUE NEW VIEW OF THE HIGH SCHOOL"

always compare pictures with some they have seen elsewhere or have in their possession. For that reason, no mediocre work should be sold, even to one who is easily satisfied. Others will see and criticize it or compare it with other pictures, and, of course, unfavorably.

I have not accomplished anything big with my school photography, but I have paid all my high school expenses and have had more spending money than many of the other girls. And before you can judge fairly as to my success you should know that at no time during my high school course did the total enrolment exceed one hundred and fifteen; and it should be remembered that the time that I could devote to the work was very limited. But my camera has given me both pleasure and profit, and I have gained experience that will enable me to do much more when I enter college next year.

A Post-Card Printing Frame

By George Parke

Summer is the season of post cards, and most amateurs, at one time or another, have occasion to print several dozen from a single negative. The ordinary printing frame does not permit of rapid or effective work being done; and, in an effort to overcome this handicap, I will explain how an old frame may be adapted to do the work expeditiously.

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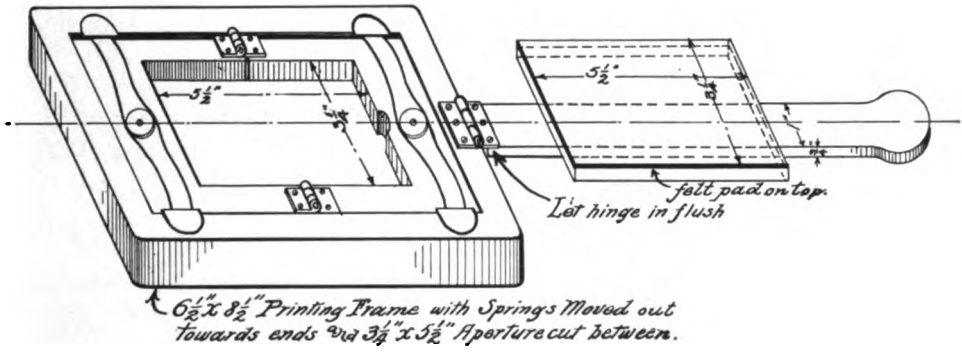
A POST CARD PRINTING FRAME

Beg or buy an old-style, 8x10, professional frame; one slightly larger or smaller will do as well. Do not get one with piano hinges, or if you do, attach the ordinary brass butt hinges in their place. Remove the springs and hinges, and the catches under which the springs fit. Then mark the back of the frame and cut out of the center, without damaging it, a space very slightly larger than a post card, leaving the edges of the opening sharp and clean. Next cut a solid piece of wood to fit the opening, making it somewhat thicker than the back, making it a moderately loose fit. Cover one side with canton flannel or a piece of old felt hat. Unite the back again, setting the hinges at the extreme edge where they will not interfere with the center piece. Fasten the springs back in place, but set them, one at each end, midway between the edge of the center opening and the end of the back. At one end of this center opening, cut a notch to allow the finger to be inserted in removing the card.



$6\frac{1}{2}$" x $8\frac{1}{2}$" Printing Frame with Springs Moved out towards ends and $3\frac{1}{2}$" x $5\frac{1}{2}$" Aperture cut between.

Take a piece of wood, one inch square and about two inches longer than the frame, and hinge one end to the center of the frame. This forms a handle for the center piece, which must be fastened to it in such a manner that the face of the old back and the new center one will press upon the negative evenly and at the same time, when closed. Lastly, replace the catches on the frame so that they hold the springs properly in their new position, and the job is complete. The sketch herewith shows the arrangement quite clearly.

To use the frame, fit in a piece of clear, heavy glass, and place the negative in position, adjusting it so as to bring the desired portion directly beneath the central opening, and then close the springs, clamping it in place. So prepared, one has only to drop a post card, face downward, into the center opening, bring the hinged back down on it, and make the exposure by holding the frame to a window or to an artificial light. With a frame arranged as described, cards can be rapidly printed from any part of a larger negative, and each one will be exactly the same as all the others from that negative.

God sometimes granteth unto a man to learn and know how to make a thing, the like whereof in his day no other can contrive; and perhaps for a long time none hath been before him, and after him another cometh not soon.—ALBRECHT DURER.

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It's All So Very, Very Simple

Courtesy of H. H. Wiles

The following is an excerpt from a letter recently received by Mr. Wiles, from a friend in another part of the State, a gentleman who had been advised by him to take up photography. Mr. Wiles thought it good enough to pass along to CAMERA CRAFT *readers, and kindly sent it on to us.*—THE EDITOR.

"Along with the shipment from the mail-order house, I got some groceries, all in fine shape; but, best of all, a camera that cost only one dollar and ninety-seven cents; with the whole outfit, three dollars and twenty-three cents, and I am truly delighted with that camera outfit. It affords such nice pastime and works just like the cream separator that my little ten-year-old girl can operate. It is so simple! I lit the red (ruby) lamp, went into dark-room, fumbled around a half hour opening box of plates from the back, turned over opened box and found directions on top of plates, removed black paper wrapped crosswise, and found plates cleated together with strips of cardboard. Very simple. 'Do not touch film side of plates,' but I could not tell film side from the side of a barn; looked them over half a dozen times, finally formed a conclusion, and then got the plates in the holders inside of an hour. Waited until next morning and then went out and took two views; still quite simple. Got caught in a barbed-wire fence and fell over ash pile, backing up to get the proper focus in making the first view. The second was to be the station and I hoped to get the sign, 'Echo,' prominent. Climbed up on grade, then backed up, then sideways; all quite simple. Had two fine views in the camera and could hardly wait until night. Read three hundred and ninety-nine pages on 'How to Develop Plates,' fixed up the different dopes, snatched a little food and shut myself in dark-room. So simple. Put plate in developing solution and shook it until it got black, or until I got black in the face from over-exertion. Then I washed it in plenty of clear water, all I had carried up from the river; then put it in the hydrophobia bath; came out, lit the white light, and when all the white or milky color had evaporated, again started to wash the plate. I changed the water as fast as I could carry it up from the river, laying myself, in so doing, liable to a suit for damages for appropriating water having priority for domestic and agricultural purposes; consequently only changed the water twelve times, and that is certainly very simple.

"Ten minutes to half an hour required to print, depending on the condition of the sun's rays, etc.; then into fixing bath and turn them over and back for fifteen minutes, then wash in some more of that clear water, changed frequently. Then, as I did not think them worth mounting, decided to simply squeegee them. I did not have the board called for by the directions, but, remembering how you used glass, I removed a window frame from a passenger coach on the siding, squeegeed those prints face down on the glass, and left them to dry and fall off. Of course, they fell off; I could not get them off

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with a crowbar, but by applying water for an hour they were induced to let go. I put them on the glass, face up, the next time, and the enclosed prints are the results of my first attempt at photography. It is such a simple and pleasant pastime. I felt, last spring, as though I should lay off for a few weeks this summer for a little recreation, but I have lost all feeling, and as for recreation, I would advise a nice camera. It is so simple. While before, I thought your camera was such a 'joy forever,' I am now trying to forget it all. I have written Freeda and told her that I have gotten a nice camera that I am going to give her for her birthday. Ha! Ha!"

STEREOSCOPIC DEPARTMENT

The Beginner In Stereoscopic Work

By Edward M. Filson

I am a rank beginner at stereoscopic work, but wishing to see how the stereoscopic pictures looked that the editor always prints so conveniently at the bottom of the page in this department, I bought a cheap "scope" costing thirty-five cents. The pictures, although only halftones, pleased me so well that I at once secured a stereoscopic camera from my dealer and took up the work. And my only regret is that I did not do so long ago. And, as there must be many others like myself in the thousands who read CAMERA CRAFT, I will set down a few things that I have learned in the few weeks that I have been using my stereoscopic outfit. They are just such simple little hints as one never finds in the magazines, possibly because the editors feel that they are entirely too elementary.

The making of the negatives is exactly the same as in ordinary work; about the only advice that I can offer is that full exposure must be given and one can disregard much that is important in composition and pay more attention to securing interest at varying planes to emphasize the effect of solidity which the stereoscopic picture gives. One who is acquainted with the stock views so popular a number of years ago will remember how persistently the photographer placed a figure in the immediate foreground, a figure usually posed as viewing the landscape beyond.

The mounting is where the only difficulty comes in. One must remember that the two pictures are transposed or turned around by the lenses, so that, the two negatives being made on one plate, the print therefrom will show the left-hand picture on the right-hand side, and vice versa. For that reason, the two must be cut apart and mounted with the two halves transposed. These two halves must be trimmed absolutely even along their base and mounted perfectly

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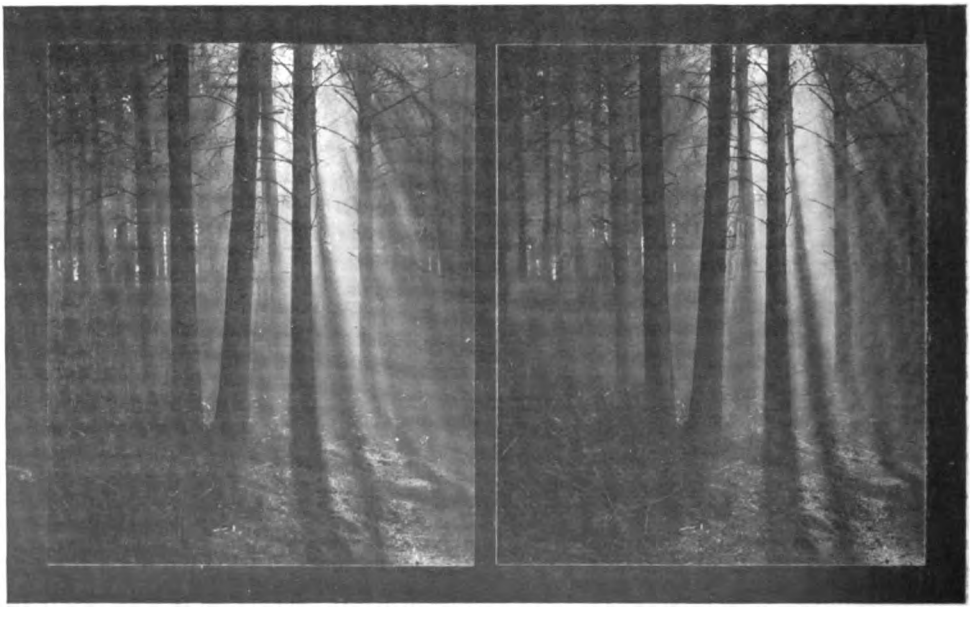
even and on the same level. Each print must be trimmed to a width of two and three-quarter inches, two and seven-eighths being the limit. If a space is left between them on the mount, that space should not be more than one-eighth of an inch in width. The height of the picture is immaterial, three and one-quarter inches being the usual height. The right-hand print, the one that is placed at the right-hand side of the mount after cutting apart and transposing the two prints, should be trimmed to show a little less of the right-hand side of the subject than does the other print. The two being trimmed an equal width, it follows that the left-hand side of the left-hand print will show less of the subject than does the other.

The other bit of advice that I can offer the beginner is to avoid making what are usually accepted as good, snappy prints. When examined through a "scope," such prints have a "snowiness" that is very objectionable. This is due to the grain of the paper causing a confusion of reflection that is intensified by the magnification of the lenses in the "scope." A good stereoscopic print is really inclined to look rather flat and weak, judged by the usual standard for ordinary work.

A Lucky Stereogram

"Sunbeams thro' Fog" just happened along, when Mr. Snow had his camera in hand, and one remaining plate. The sun's appearance was but momentary, and utterly unexpected, for the day had been growing gloomier each minute. By a sort of inspiration, he managed to expose this last plate, and thus, more by accident than design, secured his best negative of the year, and a negative from which the print was made that won the first prize of the United Stereoscopic Society, as well.—W. C. Marley.



SUNBEAMS THRO' FOG. PINE WOODS NEAR TUNBRIDGE WELLS, ENGLAND
By ALBERT J. SNOW

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

CORRECTION: On page 336, in this department in the July issue, was given a formula for Erogen developer for papers. The word "sulphide" in the formula should have read sulphite, as, no doubt, all our readers surmised. The mistake was called to our attention too late to be corrected in the last issue.—The Editor.

DRYING CARBON PRINTS: Carbon prints should be dried on cheese cloth that has been dipped in water and wrung out until it is just damp. Any wrinkles in the cloth should be smoothed out, and the prints placed, face up, thereon. The prints will dry very slowly, but they will be more flexible and smoother than when dried in the ordinary way.—Roy J. Sawyer, Kentucky.

TO CLEAN TRAYS: A piece of red rubber gas tubing about four inches long makes an excellent scrubbing brush for trays. The kind desired has a grain or tooth on the outside, and used flat or bent back on itself, it will remove fairly new deposit with water alone. If the deposit be of long standing, a little nitric acid in water will cut it loose and the tubing will complete the work. —Excel, Ohio.

A NATURAL WASHER: A handy wrinkle in washing films when out camping, and we all use films and a developing tank when camping, is as follows: Drive two stakes in the river or brook, selecting a place where the water is not too deep or rapid; then snap a clip on each end of the film and tie to the stakes with pieces of string. The running water will wash them in a very short time. —W. A. Nelson, Vermont.

FOR THAT CONTRASTY NEGATIVE: When printing, it is a good plan to always keep two extra developers made up and ready at hand. If you strike a negative that prints too hard, or one from which you want a softer print, use the strong, undiluted developer on Velox, and if Cyko is being printed, give more time and use a dilute solution. Of course, just the opposite procedure is to be followed if a harder print is wanted from any certain negative. Use the dilute solution for the Velox and the strong solution for the Cyko print.—Richard Russell, California.

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A USEFUL CONVENIENCE: Keep a roll of black passe partout binding tape with your other equipment. It comes very handy for temporarily mending a leaky bellows, for sticking masks to negatives when printing borders, and for labeling bottles. For the latter, cut a strip long enough to reach around the bottle and lap a little, and with white ink or paint letter it with the name of the contents. This label is neat, will stay where you put it, and the white lettering can be read in semi-darkness. Pour hot paraffine over it and it will be waterproof.—F. Belmont Odell, New York.

AN AID IN LANDSCAPE WORK: The beginner is apt to be led astray by the brilliant coloring of some landscapes, forgetting that these colors will only appear in monochrome in the final print. I have found that using a pair of ordinary blue glasses, costing about ten cents, when viewing the average landscape, will work wonders. As the view, seen through the glasses, appears in but one color, one learns to seek only those scenes that depend on line and mass for their pictorial effectiveness. Besides, the cost of the plates that would often be wasted by being used to photograph pretty but deceptive landscapes, is made a less serious consideration.—Roy J. Sawyer, Kentucky.

DEVELOPING IN HOT WEATHER: The use of ice is all very well if one has a sufficient supply and some arrangement whereby the low temperature, once secured, can be maintained uniformly. A better plan, as I have learned by experience, is to add formalin, in small doses, to the developer. Formalin is a liquid containing forty per cent of formaldehyde gas, and can be purchased generally. For tank developer, about one minim to the ounce should be used; for paper, about double the quantity will be better. It can also be used to good advantage in the hypo bath in place of the usual acid and alum. Three to six minims of formalin to the ounce of plain hypo bath is about right. The bath will not stay clear more than a day or two, but hypo is quite cheap, and one is never quite sure what chemical changes are taking place in an old acid-alum fixing bath, particularly in hot weather.—Excel, Ohio.

PRINTS FROM HARD NEGATIVES: Occasionally one will have a very hard negative, the result of over-development, or the using of too strong or too warm a developer, and a print is wanted without resort to reduction, which sometimes results in utter ruin of the negative. Make a print on Solio or other printing-out paper of glossy surface; and, if any dodging is necessary, use an ordinary reading glass held over those portions that are wanted more deeply printed. The printing must, of course, be done in sunlight, care being taken not to focus the rays through the reading glass too closely or the negative may be cracked by the heat. Print to the right depth and then copy this proof, making a new negative. This is a far better method than to use the original negative and try to get good prints with a soft working paper and a strong light. It is assumed, of course, that the negative is intended for developing papers.—Roy J. Sawyer, Kentucky.

USING A MOTORCYCLE: Towards the end of last season, I bought a motorcycle and used it two months with great satisfaction and success. The idea of using one did not seem practical, when first suggested to me, but I

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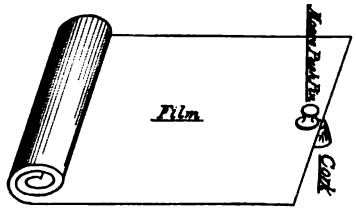
decided to try one in my view work and it has certainly made good. The riding is easy and pleasant, I gained ten pounds in weight while using it, and I had little or no trouble with the machine. I have made the greater part of a hundred miles on one gallon of gasoline, and that is certainly cheap traveling. I have both front and rear luggage carriers, which easily accommodate camera, tripod, and the other necessary parts of an outfit. Other photographers have used motorcycles and I would be pleased to hear fraternally from any such. And for any one contemplating the use of a motorcycle for a photographic trip I will gladly answer a few questions should they desire to ask them and enclose stamped envelope for reply.—A. A. Richardson, Benidji, Minnesota.

DEVELOPING FILMS: A writer in these pages recently advised holding only one end of a film and allowing the other to curl up in the developing dish. Then, another writer told how to make a round bottomed dish that is just the thing for working in that manner. But, having used the method, I believe I can add thereto. The gelatine at the end of the film gradually melts and becomes slippery under the warmth of the fingers, making it difficult to hold. To obviate this I use a push pin and small cork, as shown in the sketch herewith, to form a handle.—Carlton C. James, Hawaii.



A TUFT OF COTTON: If you are troubled with pinholes in your negatives, try the following plan: Take the usual precautions with plate holders and camera to be sure they are free from dust. As soon as the developer has flowed over the plate, dip a liberal tuft of absorbent cotton in the developer and go over the plate carefully. This will effectively remove all air bubbles. Just before the negative is placed on the drying rack, go over it again with another tuft of wet cotton. This will remove those small particles of mineral matter which become attracted to the film in the wash water, and which, when dry, are almost impossible to remove. If you are in a hurry for your negative, you can cut down the washing time about one-half or more, by occasionally rubbing the surface with the tuft of cotton. The same will also apply to prints; in fact, there is no more efficacious way of removing hypo from a print than by placing it on a sheet of glass every few minutes and going over it with a tuft of cotton, using some pressure.—C. B. S., Oregon.

MAKING ONE'S OWN ALBUMS: Get some sheets of deckle-edge cover paper, assorted shades, of the paper dealer. It comes in a variety of colors and surfaces and is generally about 20x25, each sheet making four good-sized album leaves. Cut these to fit the size and shape of your prints, leaving a half inch or a little more extra at one end for binding. It is a good plan to paste a strip of paper along both sides of this extra end, making the strips the same width as the extra allowance. This equalizes the thickness when the prints are put in and strengthens the leaves around the holes punched for binding. Dark strips should be used on light leaves and white or light paper on the black leaves.

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This makes the prints look centered. Devise some sort of a gauge and punch holes in these ends, not too near the top and bottom sides, and in the center of the strips that have been pasted on. These holes should be one-eighth inch or smaller. Then make two rings out of heavy brass or copper wire, not bringing the ends quite together so that the covers and leaves can be slipped in. The side of the rings opposite these openings should be flattened somewhat so that when the leaves are on and the opening in the rings are outside the book, the leaves will be on the straight or flattened side, keeping the back fairly straight. The covers can be made out of mounting board covered with cloth, paper or leather, as fancy suggests. It is hardly necessary to tell how the album is put together.—B. T. Farnam, Oregon.

PRINTING FROM WET NEGATIVES: It is often desirable to print from negatives immediately after fixing. This can best be accomplished in the following manner: Soak the emulsion off a worthless film by laying in hot water; take the negative directly from the fixing bath and place the film in actual contact on emulsion side, and you can make one or a thousand prints without resorting to the old method of wetting the paper and pressing into contact. The heat from the printing apparatus will not dry the negative, as emulsion full of hypo cannot be dried.—F. Belmont Odell, New York.

MOUNTING PRINTS TO STAY MOUNTED: Get a ferrotype plate, or, in lieu of that, a pane of glass; several sheets of lintless blotting paper, a sheet or two of heavy oiled paper such as is used in a letter press, a good roller squeegee, and a jar of good paste—I use Higgins—and you are ready for business. Soak the prints to be mounted in clean water and place them face down on the ferrotype plate. Be sure the water is clean and do not pile them up on the plate, but put them singly until the plate is covered or until you have down all you are to mount. With the blotters and roller remove all excess of water until the backs of the prints appear a damp matte. Then, with a good stiff bristle brush, work up some of the paste, generally as you find it; but if water is added, it must be but very little. A little work-up and the paste will work easily from the brush. Rub the paste well into the back of the print, taking special attention to see that the edges are well pasted, using only the amount that is necessary. Too much is a waste and is objectionable for other reasons that you no doubt know. With a thin-edged knife lift one corner of the print and raise it from the plate by grasping it some distance from the edge. Letting the fingers touch the pasted edge may bring away the paste, causing that particular part to fail to adhere. Holding the print at each end, allow it to come down on the mount exactly where wanted, as it can be shifted but little after it gets in contact therewith. Place a piece of the oiled paper, cut a little larger than the print, down on the face of the print; and, using the roller lightly at first, bring it into good contact with the mount. Lastly, take a clean wet cloth or soft sponge and wipe the face of the print, setting it up to dry. I would repeat, use the paste as dry as possible and brush it out as thin as you can. Working in that way, your prints will stick like a brother and you will never be ashamed to look them in the face because they do not appear well mounted.—Charles W. Everett, Illinois.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1911 No. 9

Our Thanks To Ex-President Harris

At the St. Paul Convention of the Photographers' Association of America, which closed July twenty-fifth, President Harris' opening address took the form of what he was pleased to call "The President's Suggestions." In it, he outlined the plan, which later went before the Congress of Photography, of dividing the country with a line running north and south, following the Mississippi River northward to the Ohio, along that to the Ohio-Indiana State line to the Ohio-Michigan line, and along that to the Great Lakes. This line giving about the same number of large cities on both sides. He mentioned the fear that some members had that the convention might some day go to the Western coast, and, if so, be kept there. The adoption of the proposed plan would destroy this feeling, as the convention could safely be sent to the farthest city to the westward with a positive assurance that they would get it back East the following year. He added: "Personally, I desire to go on record now as being in favor of San Francisco for 1915, the World's Fair year out there."

Contributors Will Answer Questions

We are impelled to make the statement covered by the title above, by a letter from a reader asking the address of a recent contributor. In the same mail came an excellent article from a new contributor; and in his letter he suggested that, seeing fit, we might add his address to his name at the head of the article, and at the end state that he would be pleased to answer any inquiries our readers cared to make if they would put their questions in concise form, confine themselves to the point, and enclose a self-addressed, stamped envelope. We have replied to his kind letter, saying that we did not like to do this, because it would imply that our other contributors would not gladly answer queries. In behalf of our first correspondent mentioned above, as well as any others who may be interested, we would say that all our contributors are workers who are giving of their store of knowledge and experience for the benefit of their fellow photographers, and a letter addressed to any one of them, care this office, will reach the contributor and have his prompt attention. The reading matter in our magazine is not made up of articles clipped from foreign publications; neither is it made up of matter that cost so much a thousand words, pounded out by an individual who uses more typewriter ribbon than he does plates or films. Our contributors are workers like yourselves. If you wish to write one of them a letter, simply address him care this office and it will be forwarded at once. And just as a suggestion, a word of appreciation costs you only a stamp, and it will be more than welcome to

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many a contributor who is wondering if the little article he sent was appreciated by the readers before whom it was placed.

Those Prize Articles

When we started the series of professional articles over a year ago, and promised to award an air brush for the one accepted each month, we found it impossible to carry out the plan just as contemplated. One month there would not be an article sent in, and the following month several fine ones would make their appearance. Therefore, we simply adopted the perfectly fair and equitable plan of accepting all the good ones and awarding a brush to the writers thereof, regardless of the month or the number of accepted articles on hand. Arrangements were made to supply twelve brushes for a like number of articles. This number was exceeded, in fact, nearly doubled, counting several excellent ones which we have on hand awaiting improvement in the health of our artist, Mr. Monteverde, who makes practically all of the excellent sketches used in our magazine. We must ask intended contributors to excuse us from making any further awards, at least until such time as we give notice that the competition is again open, should we find it possible to resume it. All manuscripts sent in have had attention, we believe, an order for a brush being sent, or the manuscript returned as not available. In the meanwhile we will be pleased to accept any good articles, not for this competition, with which our friends may favor us.

"Shop Talk"

Our space is rather crowded this month, and really, there is very little calling for attention. If there was, I fear too many of our readers are rather busy with their photographic work at this perhaps the most photographic season of the year. Our advisory board now numbers over fifty, our last request in the July issue bringing in the names of a large number who had held back as our readers always do, apparently through modesty alone. The portfolio of three-color work from the Society of Color Photographers of England has been started out over a route list made up of the names of those who signified their desire to associate themselves with an effort to form a like society in this country. We will be pleased to have the names and addresses of any other workers in three-color photography, to the end that they may be kept in touch with the movement. And our "Stereoscopic Department"; will those of our readers who are interested in stereoscopic work kindly contribute an occasional article for it? We are, in this issue, using therein quite an elementary article, which should show those who might contribute and yet refrain, how unfounded is their idea that they must wait until they have discovered some entirely new process or method of work or else become so far advanced that they can write in an authoritative and dogmatic manner. We have recently had the pleasure of examining some stereoscopic views, printed in carbon on celluloid, and we only wish we could send the set around to every reader of the magazine. If we could, the factories would have to work overtime to supply the demand for stereoscopic outfits.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

A SIMPLE TONING BATH

A correspondent writes to ask for a simple toning bath that he can make up and use for the occasional Solio prints that he has to make for reproduction purposes. Something that will be as inexpensive and easily prepared as possible. About the best he can do is to supply himself with a bottle of lead acetate or nitrate, and then, when he wants to tone some prints, take twenty ounces of a one in five hypo bath, and to it add one-half ounce of the lead salts, previously dissolved in water. The prints will be fairly permanent, easily sufficiently so for the purpose of reproduction, and there is no necessity of washing the prints before toning.

MAKE SOME NIGHT PICTURES

This is the ideal season for some experiments in nocturnal photography. It is quite pleasant out of doors, and it is quite easy to set up the camera and make an exposure of a half hour or so, particularly if one has agreeable company. I made a night picture of one of our summer hotels about a year ago, and in showing it to one of my friends, evidently gave him an idea. He writes from the same place this summer that he is making a lot of very fine night pictures. It seems that his interest in such pictures is encouraged by the opportunity it gives him to instruct a young lady stopping at the same place, in the mystery of photography. But that is not a part of this paragraph. What I want to urge is the taking up of such work at this most auspicious season. A few street lamps and a tree lines street, the village railroad station, a bit of the business street, a view of the veranda at close range, hundreds of subjects suggest themselves. Very often an open doorway looking into a well lighted room would give a charming composition. One could expose fifteen or twenty minutes for the interior and then make a small flash and get a suggestion of the outside of the doorway and surrounding wall. It is hard to suggest any definite time of exposure, conditions vary to such an extent, but it is easy to experiment, and, if results are not satisfactory, repeat with such change in exposure as may suggest itself. One beauty of the work lies in the fact that it is practically impossible to expose long enough to get a flat negative under the usually contrasty condition, and another lies in the fact that the wide range of effects obtainable by varying the depth of printing makes it practically impossible to fail of securing something quite printable.

USING A RAY FILTER

We have had several enquiries recently concerning the use of a ray filter. There are two points that the makers of these screens seem to forget or overlook in instructing the users. One is that the filter changes the focus slightly, about one-tenth the thickness of the filter, we believe. and the other is that the increase of exposure depends upon the plate being used, and to some extent upon the subject. The chief action of a ray filter is to hold back the blue and ultra violet rays that are over active in forming their image, so that the yellows and reds may have a chance. The ordinary plate is more or less "blind" to the reds and yellows, and for that reason the holding back of the blue makes a very long exposure necessary. With an orthochromatic plate, one having much more sensitiveness to the reds and yellows, the holding back of the blue does not cripple the activity of the plate to so great an extent and hence the increase in exposure need not be so great. If the exposure be made on some subject made up mostly of reds and yellows, using an orthochromatic plate and ray filter, the exposure may perhaps be even less than would be required with a plain plate without filter. When the maker tells one that the filter is a "five times" one, he means that, used with an orthochromatic plate, an ordinary landscape or other scene containing the average distribution of colors, five times the exposure is required that would be required with a plain plate without filter. Using the

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filter on the plain plate it will be found that ten to twenty times the exposure will be required that would suffice with the unscreened plate. To return to the filter as requiring a new adjustment of the focus, it simply necessitates securing the focus with the filter in place. If the lens is of short focus and not too large a stop used, the readjustment can be neglected.

CONDENSING LENSES FOR ENLARGING

A reader has been trying to use a single plano convex lens, one of the usual pair, for enlarging, but finds that it does not do the work. Such a lens can be used, but it is necessary to have it at least twice the area of the negative to be enlarged. The right way is to employ two plano convex lenses, mounted with the two convex sides not quite touching. These will necessitate having the diameter of the lenses only a trifle larger than the diagonal of the negatives to be enlarged.

MAKING SOLUTIONS

A correspondent in Illinois complains that in making up a certain developing formula he is unable to dissolve the given amount of chemicals in the water prescribed. Heating the water helped by causing the chemicals to dissolve, but a portion crystalized out upon the solution becoming cool. It is possible that there is a mistake in the formula; but, that being right, all he can do is to add enough water to take care of the chemical and then allow for the extra amount in diluting the developer for use. If his working formula calls for two parts of the solution in question and eight parts of water, he has simply to use half as much water again in making up his solution and then make his working formula read three parts of the solution and seven parts of water.

REMOVING STUCK STOPPERS

Frank M. Weaver, an Illinois correspondent, writes to tell how he removed a refractory glass stopper after he had tried all the ordinary dodges without success. The last plan tried was the one so often recommended of heating the neck to cause it to expand and free the stopper. Even this failed, and then he happened to think of a suggestion he had received from an article in a technical journal some years ago, namely freezing the stopper. Some chopped ice and salt was mixed up as a freezing mixture, the bottle inverted and the stopper inserted in the mixture, care being taken to avoid touching the neck of the bottle therein. After about fifteen minutes the stopper was tried and found to be easily removable. Our correspondent has tried the plan several times since, and writes to advise that it is sure to succeed where every one of the better known methods have failed.

A NEW WAY OF DOING IT

After the beginner has had the usual struggle with the production of negatives he discovers that there is considerable to be gained by selecting the right kind of paper on which to print each individual one. One amateur of my acquaintance finds it advantageous to keep on hand the hard and soft grades of two different manufacturers, claiming that so doing gives him four distinct steps or degrees of hardness from the soft emulsion of one maker through the soft of the other, the hard of the first and ending with the hard grade of the last. But it remained for another amateur of my acquaintance to devise still another scheme for the betterment of his output. He supplies himself with some particular paper and then goes through his collection of negatives for those that are exactly suited to that particular emulsion. Of course, he can narrow the available negatives down to quite a few by using the eye alone, but the final test is in making prints. Working in this way he does no manipulating, either of the developer or other treatment, and has produced collections of prints that are surprisingly uniform and good. In fact, one not aware of the irregular quality of his negatives would be led to believe that his negative-making was perfect. His collections of prints include almost every known variety of paper, and they have, all of them, apparently the technical excellence of well-made carbon prints from perfect negatives. Aristo gold paper, developing papers of different surfaces, even the humble blue print, all come in for their share of representation. And all look so extremely good that one feels almost inclined to accuse the maker of a mild form of deception in showing them as his work, at least, he can be accused of taking a somewhat unfair advantage of his brother amateurs who are making much better negatives but securing much less satisfactory prints.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

EXPOSURES WITH AUTOCHROMES AND THE WYNNE METER

The following letter has come to hand from J. Cruwys Richards; it will be found helpful, we doubt not, by many of our readers who are doing color work:

"Sir—In your issue of June twenty-seventh there is a brief extract which may prove altogether misleading from its brevity, and I shall therefore be glad if you will permit me to add to it further extracts, so that matters may be made quite clear. Mr. Partridge said: 'For testing the light for autochromes I use a Wynne actinometer, and expose the plate at f-11 for half the time the sensitive paper takes to color to the dark tint. This exposure is for a normal subject, such as a border of flowers on a bright day with the sun obscured. For special subjects the exposure must be increased or decreased as follows: Distant landscape, one-third the actinometer time; open glades, three-quarters the actinometer time; flowers in a conservatory, the full actinometer time; studio work, one and a half the full actinometer time; portraits in a well-lighted room, twice the full actinometer time. All these exposures to be made at f-11.

"'This is a simple method of getting at the exact time required, which should be reliable with every Wynne actinometer, but unfortunately it is not so, because the sensitive papers are variable and do not work at a uniform speed, some of the later issues being exceptionally fast. As a general thing this variation is of little consequence, since the latitude of the ordinary plate is more than sufficient to cover it. With an autochrome plate the exposure must be as nearly correct as it is possible to obtain, and therefore a standardizing of actinometers becomes necessary.

"'In the meter I have in constant use, and upon which the foregoing exposures are based, the paper is darkened to the full tint in four seconds when exposed to the midday sun, and I would suggest that this is taken as a standard for other workers to test their meters by. If on trial a meter is found so fast that the dark tint is matched in two seconds in sunlight, the exposure for autochromes by that particular meter will be the full actinometer time for any normal subject tested, *i.e.*, supposing the actinometer time to be six seconds, the exposure at f-11 will be six seconds. When the dark tint is matched in four seconds in sunlight (the standard), the exposure for autochromes by that meter will be half the actinometer time for any normal subject tested, *i. e.*, actinometer time twelve seconds, exposure at f-11 six seconds. If the dark tint is matched in six seconds in sunlight, the exposure by that meter will be one-third the actinometer time for a normal subject, *i.e.*, actinometer time eighteen seconds, exposure six seconds at f-11. The exposure by meters showing other variations of speed must be worked out in a similar way.

"'The exposure for all subjects other than normal must be altered in exact proportion for meters that are faster or slower than the standard.'

"I would add that Mr. Partridge has had a very wide experience in autochrome work. Amongst his examples are some of the most faithful reproductions of color I have seen. He has secured whites that are true whites and yellows that are pure yellows. Yours, etc.—J. Cruwys Richards to *Photography*."

BRUSHES FOR SPOTTING

Many find it difficult to spot a negative well owing mainly to want of skill in the use of the brush, which skill is not easily acquired. Yet another reason for trouble is the use of bad brushes. The average brush used for spotting is a cheap, very inefficient tool, that the artist would reject at the first trial, and, indeed, it is not at all unlikely that it has already been rejected by some artist or other, for such gentlemen are particular in the matter of brushes, and reject five out of every six offered to them. The brush for spotting must stand the artists'

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test or it is useless, and this test is a simple one, easily applied. When purchasing, go to an artist's colorman, and when the brushes are produced ask for a glass of water. There is nothing unusual in this request, and the glass is always kept handy for the use of purchasers. In fact, the request for it is taken by the dealer as a sign that the customer knows his business, while failure to ask for it implies the opposite. Dip the brush in the water and, thoroughly wetted, draw the brush sharply over the edge of the glass, so as to drain the water out of it. If all the hairs spring back to a sharp point, the brush is worth further test, but if they do not it is useless and can safely be rejected. If a point is formed, examine it carefully to see that the point does not consist of a single hair, but of a number of hairs all meeting. If this test is passed apply the final one, which is designed to test the manner in which the brush retains its point. To do this, work the brush about on the thumbnail as if writing with it, twisting it at the same time in all directions. If the point is retained on removing the brush from the nail, one can rely on its being a good tool, worth a fair price, and worth taking care of. For fine work a fairly large brush is always best, and it is a great mistake to select small ones. For spotting we prefer a red sable brush of the large goose or small swan sizes, costing something from a shilling to half a crown, and also we prefer a long quill mount to the heavier albata and ebony handle. Such a brush kept with reasonable care will last a lifetime, and so forms a very good investment.

CLOUDS WITH LANDSCAPES

It will be remembered that last year I reported the gist of a very active discussion in the *English Photographic Press* on graded screens and other means of obtaining clouds and landscapes together in the negative. In this discussion one point seemed definitely settled, namely, that the screen is active if behind the lens. In a recent number of the *Amateur Photographer,* L. Tennant Woods writes as follows:

"The art of printing in clouds is said to have been invented by Valentine Blanchard in the year 1863. Previous to that date, Carey Lea and Thomas Sutton suggested a method with which I have lately been working with success. It consists of an arrangement of strips of paper fixed to the back of the lens in a sort of gridiron form. Gummed stamp paper serves admirably, and the strips must not be too broad or too great in number. I find that four horizontal pieces and one vertical piece are enough. The strips should be on the lower half of the lens, and they should not reach quite all the way across to the edges. The strips may cover a little more than half of the back lens, if preferred, but I prefer to place them half way, and the shadow they cast upon the screen may be raised or lowered by means of the rising front on the camera. The exact width of the strips can only be found by trial, and their influence can easily be seen when the image is focussed on the ground glass. The definition of the clouds is not interfered with if the strips are of the right width and properly separated. When viewed upon the ground glass the sky appears to be dulled because of the strips stopping some of the light from the sky. As large a stop as possible must be used, as very small stops tend to define the gridiron arrangement upon the plate, whereas large stops diffuse the pattern.

"In testing the worth of the idea—which, by the way, I have modified slightly—I used a stereoscopic camera, one of the lenses being decorated with stamp paper, and the other used in its proper state, and I was surprised at the result. On one stereoscopic half the delicate clouds developed rapidly, and became lost in the density, whereas on the other half the sky portion was very much thinner and quite printable."

This idea seemed worth investigating. It is clearly very undesirable to have the back of the lens plastered up with paper, for we are not always taking clouds. I therefore made a little cap to fit on the back of my lens and cut out the gridiron pattern described in very thin black cardboard. Two plates exposed on the same landscape, one with and one without the screen, showed at once its ability to hold back the sky and make the clouds printable. It next occurred to me that the arrangement of transverse bars recommended was optically not justifiable as it sharply divided the sky and foreground and not necessarily at the right place. I therefore made a screen consisting of a series of rays or tongues, which,

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being broadest at their bases, would cause the chief darkening at the zenith. By way of comparison I made another screen with which the sky portion was passed through a number of perforations, the largest size upward. Four plates were rapidly exposed in rapid succession on the same clouded landscape; one without a screen, the other three with the forms of screens described. The exposure was the same, one-twentieth second at F-8 in each case. They were developed in one bath for the same time and printed simultaneously in one frame. All three of the screens gave the clouds and landscape well, but the rayed form was in every way the best; the gradation being excellent. Such a sky screen is easily made in thin metal and can form part of a cap to slip on the back of the lens. I think it may turn out a very useful addition to our armamentarium.

A NEW FORM OF THE WELLINGTON INTENSIFIER

Mr. Wellington, in a recent paper read at the Exeter Photographic Convention, described a new technique for the application of his well known silver intensifier by which its deficiencies, softening of the film and staining, have been obviated:

The practical details are as follows: In the first place, it is very necessary to harden the film. A bath of formaline is therefore used, so that the plate will withstand the softening action of the sulphocyanide. A soaking in a bath of one part of formaline to ten parts of water, for five minutes, is sufficient. This bath may be kept as a stock solution, and used over and over again. After a few minutes' rinsing, the negative is placed in either of the following for exactly one minute, the bichromate being recommended by preference:

Potassium ferricyanide...20 grains
Potassium bromide .....20 grains
Water .....20 ounces

or

Potassium bichromate.... 1 grain
Potassium bromide.....20 grains
Hydrochloric acid.....60 minims
Water .....20 ounces

Too long an immersion in either of these baths causes the image to bleach, which we wish to avoid, if we desire to retain the original gradation. In the time prescribed, there is little apparent change; but the reducing agent has done its work, and after a few minutes' rinsing the negative is ready for the intensifying solution.

The intensifier may be kept in the form of two stock solutions, which will keep good for years.

A: Silver nitrate ..... 800 grains
Water (distilled) up to 20 ounces
B: Ammonium sulphocyanide .....1,400 grains
Sodium hyposulphite...1,400 grains
Water up to..... 20 ounces

Half an ounce of B is taken, and to it is added half an ounce of A, stirring vigorously with a glass rod. The result should be a clear solution; if the stirring is omitted it is apt to be turbid. To this is added one dram of a 10 per cent solution of pyro preserved with sulphite, and two drams of 10 per cent ammonia. The negative is laid in a chemically clean dish, and the silver solution poured over it. The deposition of the silver begins to take place in a minute or two, and the image gradually gains in strength. As soon as sufficient density is acquired, the negative is placed in an acid fixing bath, until the slight pyro stain is removed, and is then well washed, as usual. It is well to rub the surface of the film with a tuft of cotton wool at some time during the washing, to remove a slight surface deposit which will be found upon it.

There is one thing upon which I must lay stress, and that is that the negative to be intensified must have been thoroughly fixed in a clean, fresh, hypo bath, and not merely have been left for some indefinite period in a stale or dirty solution of hypo that has been used on other occasions. This is important, but is a point on which I am afraid a good many photographers are apt to be careless.

So far, the process, as described, does not alter the density ratios, merely increasing the vigor of the image proportionally right through. If, however, the original negative is flat from over-exposure, we may get greater contrast by carrying the intensification rather far, and then reducing with the ferricyanide and hypo reducer. Or we may allow the negative to remain in the clearing bath for a considerably longer time, until a decided bleaching action is visible. This bleached image is partially soluble in the silver solution, and so a portion will be

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dissolved, whilst the alkaline pyro will reduce the remainder. This treatment is on the whole not really satisfactory; so that I prefer to treat the intensified image, which, by the way, should be a trifle overdone, with the Howard Farmer reducer, as just described.

In a similar way we have it in our power to make a hard negative flatter or softer, by employing ammonium persulphate, this salt (in contra-distinction to the ferricyanide) attacking the denser deposit first.

I need not point out the obvious advantage of being able to watch the growth in the density of the image, and to be able to stop it at the desired moment, which we have in this method. Moreover, the result is permanent.

It is not an everyday occurrence that a negative requires strengthening, but when the necessity does occur, with the stock solutions at hand, it is only the matter of a very few minutes to remedy it, and the work may be done on the lines I have indicated, with the certainty that the solutions used have not deteriorated, and that the work can be done without any risk of a hitch, or of failure from staining, or from any cause whatever.

EXPOSURE TIME WITH COLOR SCREENS

The *British Journal of Photography* has recently drawn attention to a little-considered factor in the use of yellow screens. It says:

There is a general understanding among photographers that distant objects require less exposure than near objects, but the purely optical conditions governing exposure show that the light intensity on the plate is identically the same for any distance of the object, provided the camera is not racked out beyond the focal length of the lens. This second fact suggests that the exposure should be the same for any distance, and therefore appears to be at variance with the first fact mentioned, but the discrepancy is accounted for when we remember that the optical considerations make no allowance for the effect of atmosphere intervening between camera and object. The atmosphere being itself a luminous body adds to the theoretical luminosity of the distant object and so shortens the exposure actually necessary. This added luminosity is practically of the same nature as skylight, that is to say it is polarised light, of short wavelength, and very actinic. Therefore, if we expose through a filter screen that is calculated to cut down skylight, it will also cut out this atmospheric light that intervenes between camera and distant objects, and then the correct exposure required for these distant objects becomes very nearly, if not quite, equal to that wanted for near objects. The theoretical conditions governing exposure, therefore, become practically true when filter screens and color-sensitive plates are in use, and consequently correct exposure for both near and distant objects is a practical possibility with a screen, though impossible without it. Here, of course, we have an advantage of orthochromatic methods, the existence of which is seldom realized.

Suppose now we consider in the case of an ordinary subject the practical application of some of the points referred to above. Assume that the view includes moderately near objects which require an exposure of one-twenty-fifth second with an unscreened plate to render their detail, and also some distant trees and still more distant hills, which, considered alone and quite apart from the foreground objects, can be adequately rendered with an exposure of one-one hundredth second on the same plate. These assumptions represent a quite average landscape view. If, in a case like this, we expose for the foreground, the distance is about four times over-exposed, a fact which probably may not be of any very great consequence owing to the comparative unimportance of the distance. If, on the other hand, we expose for the distance so as to render it as clearly as possible, then the foreground will be badly under-exposed and the result spoilt. Suppose, however, we want the distant view only with the object of subsequently enlarging a portion of it, then one-one hundredth second will give the result we want, for the under-exposed foreground will be omitted from the final enlargement.

Now, again, consider the same subject when color-sensitive plates and an orthochromatic screen are in use. As before explained the screen will cut out the atmospheric effect which otherwise adds to the luminosity of distant objects, and so an exposure adjusted for the foreground will be equally correct for the distance. If, therefore, a five-times screen is in use the correct exposure for both foreground and distance will be about

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one-fifth second. Here we reach the point that has been such a source of trouble to our querists. If one-fifth second with the screen is correct for distance, that without the screen would require only one-one hundredth second, it is obvious that for this part of the subject the screen is acting not as a five times but as a twenty times filter. In each of the cases brought to our notice the worker had aimed at photographing the distance only, and in estimating exposure had calculated that necessary without a filter and then multiplied by the filter factor number, and so had given only about one-quarter the exposure really necessary. The fundamental fact that filters more or less completely eliminate the effects of distance was either forgotten or not known, and so the mistake was very readily made.

As most exposure tables and meters agree in estimating that distant views require only quarter the exposure necessary with near objects, that is to say with subjects classed as heavy foreground, we may take this factor of four as being fairly well correct. Therefore, when estimating exposures for distance with a screen we shall not be far out if we take four times the amount given in the tables and then multiply by the nominal screen factor. This will be the same thing as considering distance objects to be near ones. As an alternative we may estimate exposure in the ordinary way and multiply by four times the filter factor, but this procedure has the disadvantage of suggesting that the filter factor varies with the distance, which is hardly a correct way of looking at the matter. It need hardly be pointed out that multiplying by four is only a rough-and-ready rule. Atmospheric conditions vary greatly, and in some cases the allowance may be too much, while in others it is conceivable that it may even be too little.

A TIP FOR SPOTTING

We have already said that many fail in spotting owing to a lack of skill with the brush. That means usually that they do not know how to charge a brush or how to keep it charged, nor yet how to keep it sharply pointed while full of color. The unskilled may, however, take a tip from the Easterns, who use brushes for writing and for the very finest and most minute line work. These brushes are generally of large size, bigger than the small swan we have recommended, and very perfectly made and formed. To facilitate their use they are dipped in gum, which is allowed to harden, and when dry the extreme point only is moistened with ink and used for writing. For spotting we have tried a very similar dodge and with considerable success. A brush was dipped in "Photopake" and allowed to harden. When dry, the point only was moistened with water, and spotting proceeded with at once. If "Photopake" is not favored, any pigment can be used if mixed with weak gum water. The point will harden when the brush dries, so we must be careful to see that the point is properly formed when putting the brush away after use. It is not advisable to use quill-mounted brushes in this fashion, but albata mounts (not tin on any account) should be selected if this mode of working is to be adopted.

PHOTOGRAPHY OF MEN

Character, in portraiture, is not a matter of particular physical facts, not of eccentricities, not of accidental momentary conditions, not even involving the much-vaunted Cromwellian wart; neither is character even a matter of phases, but rather of basic tendencies.

An attitude, physical or mental, may occur, which, if recorded, would not constitute a portrait. A face can be so lighted or otherwise arranged that while it may be proved to have been an actual condition of the moment, is not at all characteristic.

The vogue of the day seems to accept the idea that the glib "catching" of the unusual is the true delineation of character, but the results rarely carry conviction, and are beneath the purpose of portraiture.

"Style" is credited, at times, with bringing about what is termed character; but it is, of course, only a vehicle and not a result. Occasioned by the original habit of the particular mind and influenced by training, pictorial methods acquire a certain slant which we define as "style." General practice, through the diversity of subject matter, makes for variety of style, and, per contra, the specialist is led to repetition of effects which, sooner or later, he will realize, fail to express the subject. The more interesting the style the greater the danger, for the style should never be permitted to be more interesting than the matter.

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While it is true that the value of the work of an individual lies in the way he sees the subject, at the same time one must be sure that his style is kept in a state of flexibility —so that he may show the difference between men rather than their similarity. The way you see the personality is the point, for it is what you see in men, not how you dress them—that is the reason for your professional existence, and inflexible style is, after all, only a species of clothing, good or bad—as it fits. As to the other extreme, it is my experience that modish innovations or eccentric flights have no value in the eyes of the friends of the subject as compared with sound exposition of character.

The basic trend is what should be portrayed, how he affects you, rather than what he appears to the eye—what he thinks, not what he says—what he would do rather than what he does do—that is character.

Sympathy is the only road to this innermost region, and Lafcadio Hearn says that "sympathy is limited to comprehension"—comprehension is the result of directed and consecutive effort—therefore, specializing is necessary in order to acquire comprehension, as comprehension is necessary to acquire that genuine sympathy which is to open the gate to the other man's character.

The man who would be successful as a "photographer of men" must be sympathetic to what is found common in men; he must be capable of liking, even though the unlikable is strongly evident, and when the likable is found, he must be able to expunge everything else from his measure of the man.

I am conscious of the fact that my failures are directly traceable to my inability at times to conquer dislikes, and put in their place an appreciation of good qualities which my lack of control prevented my finding, and unjustly diminished—a diminution of anything admirable in another man is fatal to a "photographer of men." A painter is remembered by his best works, and a writer by his finest thought; the pot-boilers and the faulty writings are lost and forgotten, and a photographer's client is entitled to a perpetuation of his finest and best.

By reason of his limited sphere a "photographer of men" would be led to grotesquerie if he were to indulge in fault-finding criticism of men, for one rapidly grows strong if effort is continued and confined. Therefore, the necessity for the appreciation which invites, gives confidence, disarms—or rather takes away occasion for arming—that is the power which makes most for the success of a "photographer of men."

Emerson says, somewhere, "He who would be powerful must have the terrible gift of familiarity." It must be the true familiarity, not the make-believe, for that won't make men believe. I doubt whether I have ever made a portrait of a Japanese man that has been worth the making—I know that I don't understand them—and with them I have not "the gift of familiarity." To be able to think in parallel with your client is an absolute necessity—to occupy his point of view, to look over his shoulder—nothing short of this will answer if the game is to be worth while.

The work is more exacting than general practice; more is expected of you and less credit is given for the result; your everyday pictures are compared with the happy accident of the general practitioner, and if you are only equally successful you are regarded as a failure, while if you have really gone closer you are given to understand that it is no more than should be expected, for "you are the specialist."

One is apt to overlook the fact that while the pictures are of men, they are for women. Ninety per cent of my work is done for some woman, and the other ten per cent, while perhaps made primarily for business purposes, is reviewed by women; so the truly successful "photographer of men" must be blessed with bifocal vision, capable, also, of seeing over the woman's shoulders—and permit me to observe that they are sometimes difficult shoulders to see over! The man who is master of his business frequently occupies the role of a lovely white rabbit in Madame's household. In America 'tis said that they sometimes become so tame that they will eat out of the ladies' hands, and the "photographer of men" then has need for sympathy—if madame does the buying!

Seriously, seeing the man as the woman sees him is most difficult of acquirement, and most necessary, because when the picture is for the woman, it must satisfy the woman, or—be it ever so good, viewed from any other point—it is a failure, for it fails of its only purpose.

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Therefore, if you would be a "photographer of men," be sure that you are not a scoffer; be sure that you have that genuine admiration for something which is in every man; be sure that the joy of the occasional triumph is recompense enough to satisfy you; be sure that pounds, shillings and pence is not the real motive of your professional life—and then, be prepared for the times when your inadequacy forces itself to a hideous recognition, when you will say, "to have arrogated to myself the title of 'photographer of men' proves that I am a first-class, a number one, presumptuous ass." At any rate, these are words that I have used to myself.—Pirie Macdonald, before the Professional Photographers' Association, London.

LIVING OLD MASTERS BY STRAUSS

The Sunday edition of the New York *Herald* for July twenty-third carries a full page in colors of examples of wonderful imitations of famous paintings, portraits by the old masters, by J. C. Strauss. "Papa" Cramer is posed as "Erasmus," by Holbein, F. Dundas Todd, as Raphael's "Sistine Madonna"; Pirie MacDonald, as "The Merchant," by Holbein; Mr. Strauss himself as Durer's "Imhoff," and so on through a list that includes a number of the leading photographers of the country. Mr. Strauss has been making these pictures for a number of years, mainly to establish his theory that strength and individuality of feature can be found as well represented in this twentieth century as in the sixteenth and seventeenth. The results are most surprising, and a strong testimonial to the skill and art which Mr. Strauss has at his command. More so when it is learned that each was posed and lighted to secure the desired effect without the use of a copy of the original as a guide, Mr. Strauss depending entirely upon his mental picture of the painting selected, to be imitated in each particular case. The average photographer can form some idea of the study this leader has given the art side of his work by comparing his own knowledge of the old masters with the ability to reproduce a wide range of subjects from memory in this way. And it is just this matter of hard study that has made Mr. Strauss the leader that he is in his chosen profession.

THREE LARGE PORTRAITS

The three largest direct portrait negatives and positives ever shown at a photographic convention, and probably the three largest ever made, were on exhibition in the Seed demonstrating room on second floor of the Convention Hall, at St. Paul. These negatives and positives were made by W. S. (Daddy) Lively, of the Southern School of Photography, on Seed 26X plates, and are from one-fourth to one-third larger than life size. We remember that Lawrence, of Chicago, made a life-size portrait of Alexander Dowie, but Daddy's negatives are larger than life-size. The carbon prints from these negatives were to be seen in the Eastman exhibit on the first floor, and were also remarkable. Mr. Lively was compelled to use a camera of his own construction to produce these interesting negatives, and he is deserving of much credit for their remarkable quality.—*National Daily.*

DEVELOPER FOR SHORT EXPOSURES

A local worker has become very much enamored of a Satrapol-pyro formula for his focal-plane shutter work. He claims it is the best developer for plates inclined to under exposure that he has ever used. The formula is as follows:

A:	Water, cold	8 ounces
	Potassium metabisulphite	3 drams
	Satrapol	80 grains
	Pyro	80 grains
B:	Water	16 ounces
	Sodium sulphite, dry	3 drams
	Sodium carbonate, dry	12 drams
	Potassium bromide	15 grains

To use, take one ounce of A, four ounces of B, and five ounces of water. Development requires about five minutes. Solution A will keep indefinitely in a well corked bottle, but in warm weather the sulphite of soda causes solution B to gradually deteriorate, so that it is best not to make it up in too large quantities. The formula is the same as that published on the Satrapol formula sheet, which also contains excellent formulas for papers, tank developing, and the like. It tells how a developer for Artura is diluted for portrait Cyko, when and how to use iodide in the developer, and other valuable suggestions to the user of Satrapol. Write Schering & Glatz, 150-152 Maiden Lane, New York.

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NEW MEMBERS.

2976—David H. L. Wiles, 1227 Cambridge St., Philadelphia, Pa.
3¼x5½, developing post cards, of general subjects; for the same. Class 1.

2977—Albert K. Sinclair, 392 McClellan Ave., Detroit, Mich.
Class 2.

2978—Russell Gibson, care Franklin Life Ins. Co., Springfield, Ill.
3¼x5½, developing and printing-out papers, of farm views and various scenes from Illinois for anything of interest. Post cards and unmounted prints. Class 1.

2979—W. H. Waggoner, Eureka, Ill.
Class 3.

2980—H. C. Wilson, Jr., 1403 Union Ave., Memphis, Tenn.
3¼x4¼, 4x5, and 5x7, various papers, of subjects of general interest, views of parks and public buildings; for anything of interest. Only first-class work sent or taken. Class 1.

2981—F. J. Bielefield, 31 Russell, Middletown, Conn.
4x5 and 5x7, developing paper, of landscapes and public buildings; for the same. Desire to exchange only 4x5. Class 1.

2982—R. B. Rose, Meadow Lane, Edgeworth, Pa.
Class 2.

2983—Glenn Grosscup, Box 350, Valley Junction, Iowa.
4x5, developing and printing-out papers, of railroad and other interesting views; for sports and anything interesting and artistic. Class 1.

2984—C. M. Seymour, 1186 Park St., West Hartford, Conn.
4x5 and 5x7, various papers, of types, landscapes, cities, military and camp scenes; for foreign types especially, but all foreign views and art poses. All exchanging to be sent and received on approval. Class 1.

2985—Her. Lacasse, Box 88C, Vandreuil Station, Prov. of Quebec, Canada.
3¼x4¼, developing and printing-out papers, of views; for all kinds of views. Class 1.

2986—C. L. Dawdy, Box 132, Washington, Kan.
Class 2.

2987—Peter Kirch, Route 3, Box 30, Santa Rosa, Cal.
Class 2.

2988—Harry M. Suter, 3005 W. North Ave., Baltimore, Md.
3¼x4¼ to 6½x8½, developing paper, of general views, landscapes, and harbor views; for interesting and general outdoor views or post cards. Class 1.

2989—George Raabe, R. F. D. No. 1, Belle Plaine, Iowa.
3¼x5½, post cards, developing paper, of scenery; for the same. Class 1.

2990—Jas. L. Vaughan, R. F. D. No. 1, Belvidere, N. Y.
Class 2.

2991—Charles Hutter, Box 126, Fort D. A. Russell, Wyo.
Class 3.

2992—F. E. Briggs, Fulton, Cal.
Class 2.

2993—Sandford Mills, Hailey, Wyo.
Class 3.

2994—Emil A. Johnson, 1031 Townsend St., Chicago, Ill.
5x7 and smaller, printing-out paper, of general subjects; for the same. Post cards preferred. Class 1.

2995X—N. J. Young, Klickitat, Wash.
3¼x5½, developing paper, of landscapes; for the same. Class 1.

2996—C. C. Hollenback, 44 W. Broad St., Columbus, Ohio.
Post cards, various papers, of landscapes in Middle States; for Porto Rican, Hawaiian, and Philippine landscapes. Post cards only. Class 1.

2997—Chester C. Harman, 224 Main St., Kenosha, Wis. Class 3.

2998—John Syphax, 532 Broadway, New York City, N. Y.
3¼x4¼ and 8x10, printing-out paper, of miscellaneous views; for the same. Class 1.

2999—A. W. French, Ancon, Canal Zone, Panama.
3¼x5½, printing-out paper, of Canal Zone tropical scenery, canal works, and children; for landscape and genre. Class 1.

3000—Art Miller, Jr., Eagle River, Wis.
3¼x5½ and 4x5, developing paper, of marine views, scenery, and the like; for scenery and landscapes, also pictures of fast motorboats. Post cards only. Class 1.

3001—Howard Carviou, R. F. D. No. 2, Marinette, Wis.
4x5 and post cards, various papers. Class 1.

3002—George H. Scharr, 15 No. Vermont St., Brooklyn, N. Y.
Up to 8x10, various papers, of many different views; for views of any kind. Post cards only. Class 1.

3003—Ralph A. Christensen, 2217 Lewis St., Chicago, Ill. Class 2.

3004—John F. Lewis, Box 204, Donora, Pa.
Class 2.

3005—George S. Schilling, 1080 Ryan St., Appleton, Wis.
3¼x5½, developing paper, of landscapes, river scenes, large buildings, and woodlands; for camping and hunting scenes, marines, mountain scenes, landscapes, and anything suggestive of outdoor life. Class 1.

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3006—F. W. Wheeler, 27 Main St., Springfield, Vt. Class 2.

3007—Mrs. D. W. McCart, R. F. D. No. 3, Bloomer, Wis. Class 2.

3008—R. George Tichborne, 502 Whippo St., New Castle, Pa.
Class 2.

3009—R. G. Mueller, 619 West 4th St., Faribault, Minn.
5x7, 4x5, 3¼x5½, and 3¼x4¼, developing papers, of landscapes, views, and portraits; for general and stereoscopic views. Write German or English. Class 1.

3010—D. G. Hilts, 512 Elizabeth Ave., Kansas City, Kan.
Class 2.

3011—Levi French, Oakdale, Cal.
3¼x5½, developing papers, of landscapes, farm and village scenes, buildings, etc. (California and North Dakota); of similar views or pictures of anything of general interest. Post cards or unmounted prints. Class 1.

3012—Theo. Schwartzentrub, Lock Box 18, Neosho Falls, Kan.
Class 2.

3013—H. R. Josten, 36 East 39th St., Bayonne, N. J.
Class 2.

3014—R. Romig, Box 1, Leland, Wash.
3¼x5½, 5x7, and stereos, developing paper, of outdoor scenes, landscapes, mountains, hunting, and logging scenes; for anything of interest. Post cards, 5x7 prints and stereos. Class 1.

3015—Blanche M. Lantzy, Beaverdale, Pa.
4x5, various papers, of people, buildings, and scenes; for any kind. Class 1.

3016—William H. O'Brien, Elkader, Iowa.
Class 2.

3017—Harold Hermann, 2237 Francis Lane, Cincinnati, Ohio.
2¼x3¼, developing and printing-out papers, of views of Cincinnati and surrounding territory, and scenery; for landscapes, marines, views, and scenes. Can read and write German. Class 1.

3018—F. D. Cargin, Lock Box 193, Marcus, Iowa.
3¼x4¼, developing paper, of local views, buildings, and scenery; for anything of like nature or special views of interest. Prints or post cards. Class 1.

3019—Hugo O. Ecklund, 726 Phelps St., Red Wing, Minn.
Class 2.

3020—C. J. Barnett, 107 N. Vermilion St., Danville, Ill.
Class 2.

3021—Irving Eldredge, Sawyers Bar, Cal.
Class 2.

3022—D. McVicar, care O'Brien, McDougall & O'Conner, Fauquier, Ont., Canada.
3¼x5½, developing paper, of snaps of various views; for the same. Post cards only. Class 1.

3023—S. H. Wood, Lock Box 311, Oxford, Neb.
All sizes, developing paper, of general views; for the same. Class 1.

3024—F. F. Wells, Star Route, Hilton, Ohio.
Post cards, 2¼x3¼, and 4x5, developing paper, of landscapes, street scenes, and river views; for marine views (or sea), mountain scenes, and landscapes. Class 1.

3025—Felix Cremer, Box 213, Needles, Cal.
3¼x5½, developing paper, of artistic scenery, buildings, and pictures of life; for the same. Class 1.

RENEWALS.

150—J. C. Shinkle, Woodland, Cal.
5x7, developing paper, of scenery, also post card views, etc.; for the same. Class 1.

672—Henry L. Dillon, R. F. D. No. 3, Darlington, Pa.
4x5 and 5x7, developing and printing-out papers, of farm and country views, flashlights, animals, and miscellaneous views; for street scenes, foreign cities, towns, and harbor views, and principal harbors of the U. S. Prints and post cards, prefer prints. Class 1.

1672—A. H. Fenn, 15 Colony St., Meriden, Conn.
Stereos, printing-out paper, of Connecticut natural scenery; for sample exchange of stereos only. Class 1.

1714X—H. A. Nerison, Westby, Wis.
Post cards. Class 1.

2059X—Don Campbell, Box 23, Hilts, Cal.
3¼x5½, developing paper, of landscapes, and scenes of general interest; for anything of interest. Post cards only. Class 1.

2078X—L. Hanlon, Whangarei, New Zealand.
Stereos and post cards of characteristic New Zealand scenery, volcanoes and Thermal wonders, also cards of English, Irish, French, Italian, Suez Canal, Colombo, and Australian scenes. Only good work accepted and sent. Class 1.

2151—Pres. Fidler, Bray, Cal.
Class 3.

2186—Charles D. Fisher, 131 Walnut St., Reading, Pa.
5x7 and 4x5, developing paper, of portraits and scenery; for the same. Class 1.

2548—J. E. Sundberg, Coggon, Iowa. (Was Anamosa, Iowa.)
Post cards, cabinets, and 5x7, developing paper, of views, buildings, portraits, etc.; for anything that is of interest. Must be good work. Class 1.

2563X—Nathaniel Mortonson, 806 High St., Marquette, Mich.
Class 2.

2571—A. E. Lake, Burchard, Minn.
Class 2.

2580—George Bolinger, Box K, Vanderbilt, Mich.
Class 2.

2719—J. H. Catton, Box 324, Honolulu, T. H.

CHANGES OF ADDRESS.

947—Harry M. Biggin, 60½ Ellsworth Ave., Sharon, Pa.
(Was 21 B St.)

1284—William Thunen, 220 Bridge St., Oroville, Cal.
(Was Cherokee, Cal.)

1921—G. T. Simmons, Laurel, Mont.
(Was Walcott, N. D.)

1958X—Chas. T. G. Smith, 817 12th St., Oakland, Cal.
(Was Benicia, Cal.)

2034X—Jos. R. Poole, 147 Clark Ave., Chelsea, Mass.
(Was 158 Shawmut St.)

2550—J. W. Green, Ewa, Oahu, care Magnetic Observatory, T. H.
(Was Honolulu, T. H.)

2596—Maurice Windus, Ronan, Mont.
(Was Pullman, Wash.)

2642—Fred C. Miller, 603 South 4th St., Effingham, Ill.
(Was Tucson, Ariz.)

2658—John A. Koch, 231 Capitol St., Charleston, W. Va.
(Was Hinton, W. Va.)

2759—Palma H. Grahn, Stoughton, Wis.
(Was Maddock, N. D.)

2861—Chas. Lindberg, 109 N. 4th St., Duquesne, Pa.
(Was Munhall, Pa.)

2896—H. F. Albert, Box 56, Newcastle, Wyo.
(Was Laramie, Wyo.)

2962—A. Protz, 52 W. Huron St., Chicago, Ill.
(Was 746 La Salle Ave.)

WITHDRAWALS.

2488—Merritt Davis, Salem, Ore.
Lack of time.

2591—Tom Mandry, Oklahoma City, Okla.
Lack of time.

2690—Bartlett Johnston, Collbran, Colo.
Will withdraw temporarily on account of moving to California. Will give notice when ready to exchange again.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

MANNING'S MASKS

Do not miss the full-page advertisement of Manning's Mask in this issue. They are a very fine addition to the printing equipment of every photographer, and a supply should always be kept available for use when wanted. Very often they will be found the one thing that will make the difference between a commonplace photograph and a pleasing and decorative production. For post cards they are just the thing to secure the finished effect that much of that work seems to lack. The advertisement is one that will not appear regularly, so do not fail to look it up in this issue. The M. & M. photo mats should also be given consideration.

REPORTED BY WILLIAM WOLFF

Johnson & Son, from Minneapolis, have bought the McCandless Studio, in Boise, Idaho, and have made a good many alterations in the way of improvements.

The R. H. Sigler Studio, as well as that of Mr. Stamper, of Boise, Idaho, are as well appointed as the average in our larger cities.

Miss Mabel Lee Burnett and Mrs. Mary Chandler Clark have an up-to-date studio in the Thomas Biglow Building, Reno, Nevada.

Goodner & Effey have opened a new studio in Reno, Mr. Goodner coming from one of the larger Eastern cities.

Mrs. Hartsook has just moved into her new studio at Tacoma.

The Elite Studio, at Baker City, Oregon, has just completed some extensive alterations.

W. S. Bowman, of Pendleton, Oregon, was on a camping trip recently.

Mr. Wheeler, of Pendleton, is taking a five-weeks' trip in the East.

AN INTERESTING CATALOGUE

Our readers will do well to send for a copy of the new catalogue of the Hall Mirror Cameras. It contains, in addition to a full description of these excellent cameras, a wealth of most interesting reproductions of high speed work made by some of the best known newspaper photographers in this country. Be sure and send for a copy, addressing, The Hall Camera Company, 14 and 18 Dunham Place, Brooklyn, New York.

ILLINOIS COLLEGE OF PHOTOGRAPHY

Mr. J. H. Scott, who has been engaged in the photograph business the past two years at Ely, Nevada, has resumed the position which he formerly held as instructor in the printing and finishing department. Professor McCorkill, whom he succeeds, has purchased a well-equipped studio at Newton, Illinois.

We received pleasant visits last month from former students Frank Meyers, 1908; J. M. Gorham, 1910; Maud Van Borssum, 1909, and Lewis Barrack, of 1910. Mr. Meyers is now conducting a studio of his own, and his father is taking a course in photography with us.

We are just in receipt of the wedding announcement of Alfred Herried, student of 1910, and Miss Nora E. K. Hanson, of Taylor, Wisconsin. Mr. Herried has an excellent position in Springfield, Illinois.

The College Camera Club had a splendid exhibit of the work of the American Photography Salon on display at their Club rooms on the twentieth. The pictures were loaned to the Club through the courtesy of the *American Photography* magazine.

A BIRTHDAY PARTY

George Kahn, editor of *Photoisms,* celebrated his twenty-first birthday on Sunday, July thirtieth, at his residence on West Ninety-third Street, New York.

He entertained a number of his friends of the New York Camera Club at dinner, and proved himself to be the silver-tongued orator of the evening. Amongst those present were his parents, Mr. and Mrs. Adolph E. Kahn; his brother, F. W. Kahn, M. Bernstein, Dr. M. Degenhardt, A. J. McKenna, J. H. McKinley, H. Galoupeau, C. F. Mazdon and "Square Deal" Willoughby. A large floral horseshoe, from members of the Club, was presented by Mr. McKinley.

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AN IMPORTANT UTILITY

It has remained for a Birmingham, Alabama, professional, H. P. Morton, to devise a simple and rapid working little device for the shaping of unmounted prints on developing paper. For a long time Mr. Morton experimented in an effort to produce a tool that would be more satisfactory than the means commonly employed, and Morton's Print Curver is the result. It has been in use in his shop for almost two years, and has been found well nigh invaluable. Demonstrators visiting his studio have endorsed it in a most unqualified manner, and repeatedly

advise that it be put on the market. This last is now being done; and, as it is sold under an absolute "money back" guarantee, we would advise all our readers to look up the advertisement in this issue and send for the size that will best suit their wants. It is as necessary to the present-day photographer as the burnisher was to the photographer of a few years ago. It is a time, patience, and annoyance saver, and particularly with double weight papers and where prints are to be delivered in the popular "tacked on" form, it is a boon indeed. There is very little danger of anyone sending one of these "Curvers" back and getting their money after the thirty days' trial which is allowed.

EURYNAR CATALOGUE

An interesting, well illustrated catalogue of the Eurynar lenses has reached us from the American agents, Kreps & Stelling, Augusta, Georgia. This lens is one of the most popular in Germany, the land of good optical instruments, the factory of the makers being, perhaps, the largest in that country. The prices are low, and should prove interesting to our readers who want a good lens at a moderate price. The agents named above will be pleased to send copies of this new catalogue and give attention to any correspondence concerning these goods. Write them.

DO NOT FAIL TO SEND FOR ONE

There is a new catalogue of Crown lenses just issued. It contains some fine illustrations, pictures that will interest camera users of every class. Over in the back is some well selected reading matter giving the definition of terms used in photographic optics and lens descriptions. The list of Crown lenses describes the new Crown Anastigmat, Series 1, working at f-4.5. This new lens making the Crown line practically complete, the list embracing lenses suited to every purpose of the professional and amateur. Address, Crown Optical Company, Rochester, New York.

LOS ANGELES CAMERA CLUB

The regular monthly notice gotten out by Secretary Adlard announces the outing for the month as a trip to Balboa, a delightful spot for photographic work, situated on one of the Pacific Electric lines. The regular meeting date has been changed from Wednesday to Thursday evening.

A SOFT FOCUS PORTRAIT LENS

The Taylor-Hobson Company, of New York, have placed on the market a single achromatic lens known as the Cooke Achromatic Portrait Lens. This is really the old Rapid View and Portrait Lens, made twenty years ago by Taylor & Hobson, of Leicester, England, and known then as the R. V. P. For many years the lens has been used by artists like Mrs. Kasebier, Clarence White and Alfred Stieglitz, and has been preferred by them to the modern anastigmat. It has been marketed as the result of numerous enquiries that have been received for a lens of that type. Whoever expects sharp definition will be disappointed, but the photographer who desires softness and roundness coupled with fine modeling and a true perspective, will be both astonished and delighted.

Each Cooke achromatic portrait lens is furnished in an English sole leather carrying case, and shows the same fine workmanship

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that characterizes Cooke anastigmats. The lenses work with a full aperture of f-7.5. Full particulars will be mailed on request, by the Taylor-Hobson Company, 1135 Broadway, New York.

THE POSITION OF THE HEAD ON THE MOUNT

An amateur friend was telling me his troubles the other day, and incidentally he brought out a fine bust picture of a rather pompous and somewhat undersized mutual acquaintance which he had taken, but which the subject had positively refused to appreciate. I looked it over carefully. It was an excellent portrait; the lighting was fine, and the technical work perfect. But I noticed that the space surrounding the head and shoulders was rather generous, particularly at the top. Knowing the sensitiveness of the subject to his lack of size I thought I could locate the trouble. We took a print from another negative of the same subject, trimmed it rather close, leaving but little room above the head, mounted it in a folder, and my friend agreed to submit it to the gentleman the next day. The next time I met my amateur friend the first thing he told me was how pleased the previously dissatisfied subject had been with the last submitted picture. He pronounced it the best picture he had ever had taken, and warmly upbraided my friend for not having had the good sense to see it himself and show a proof from it in the first instance. The experience gives a good lesson to portrait photographers. If the subject is rather taller than the average, do not emphasize the fact by bringing the head too high in the picture space. If shorter, do not get the head too low. The photographer, in passing judgment upon his own work, does not see these things as does the sitter. He may have a certain position for the head in the picture space, and place all of them there, regardless of the height of the sitter. The photographer who keeps all his heads low will fail to please many of his shorter subjects; the one addicted to the high position will find some of his taller subjects dissatisfied. And the strange part of it is that even the subject fails to recognize the real cause of the difficulty.

SEND FOR A COPY

Photographers who are interested in improving their lens equipment should correspond with Messrs. Bausch & Lomb Optical Company and secure a copy of "What Lens Shall I Buy." This booklet is along quite unusual lines, and abounds in useful suggestions. Address them at Rochester, New York, and mention this publication.

"THE MAN WITH THE CAMERA"

The line-cut herewith shows one of the strongest and most attractive posters ever designed to advertise and sell photographic goods. The original, a lithographic reproduction, 12x18, possesses an exceedingly pleasing color combination; is bound to attract, in most forceful manner, the attention

of the public wherever it is displayed. We may add that this poster is also shown in a large scale on the outside wall of the factory premises of the C. P. Goerz American Optical Company, in New York, and as the same poster is used extensively by the other branches of the Goerz Company, all over the world, the traveling public will soon be familiar with the "Man with the Camera," and will know that the world-famous Goerz products may be had wherever this poster is shown.

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Prints of the highest quality with the greatest ease of manipulation—

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Print by daylight, wash and fix.

American Aristotype Division,
EASTMAN KODAK CO.,
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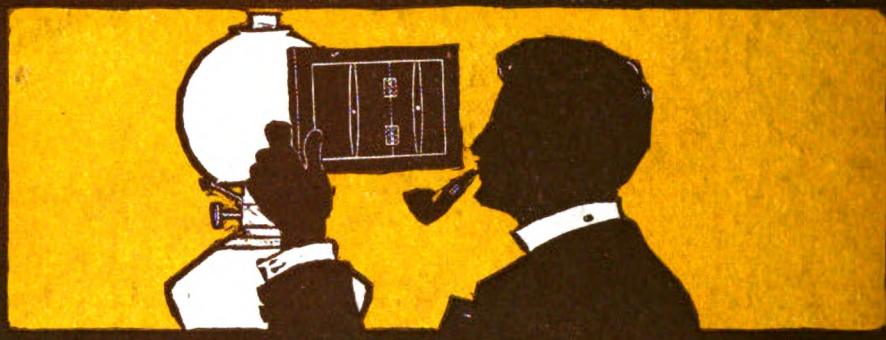

Make your album of *Vacation* pictures an album of *Velox* pictures:

You secure the best results on Velox because it is the one paper made expressly for the amateur.

Ask for the Velox Booklet.

EASTMAN KODAK CO.
ROCHESTER, N. Y.

All Dealers.

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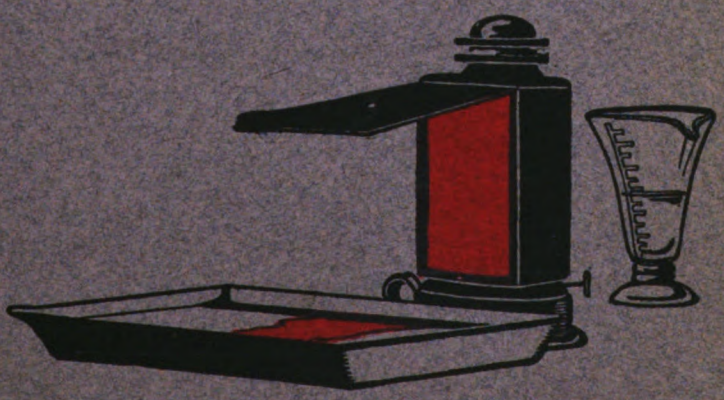
Vol. XVIII No. 10 OCTOBER, 1911 Price, 10 Ce

Camera Craft



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SAN FRANCISCO, CALIFORNIA

"Get it in the print"

Cyko will do it

No matter whether your negative is only fair—or even poor. No one sees the negative. It's the print that makes or mars your photographic reputation.

Cyko Paper

is plastic and responds to variation in treatment. It gives soft or brilliant prints at will, and compensates for defects of a badly lighted negative.

Ansco Company
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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII OCTOBER, 1911 No. 10

A Method of Overcoming Halation

By J. H. Hallberg

With Illustrations by the Author

Mr. Hallberg is one of the leading consulting and manufacturing electrical engineers of New York City, and he makes considerable use of his camera in connection with his electrical investigations. Some remarkable photographs of electric arcs recently came to our notice and Mr. Hallberg, the maker, was asked to give our readers a description of his methods, which he does below.—The Editor.

I am sending herewith two prints. The first, showing complete reversal of the image of the arc, the most pronounced form of halation, is from a negative made on a non-halation plate developed in the ordinary way. The second was made on an ordinary plate, but developed by the special method given in Volume II of the "Library of Practical Photography," which I recently purchased and find a great assistance to me in my work. This second photograph is, for my purpose, better than the original subject, for the reason that it so beautifully illustrates the different degrees of the light intensity at the arc craters. With such results possible, they can be studied, compared, used as telling illustrations, and filed away as records having a value that perhaps only an investigator and student of electrical phenomena can appreciate to the full. Both photographs are of the same electric arc, one of eight thousand candlepower, on an alternating current, and intended for a projecting machine. They were taken through the open door of the sheet-metal lamp-house in which it was installed.

As to a description of the method employed, I can only say that I followed as closely as possible the instructions laid down in paragraphs 365 to 379, inclusive, in the volume mentioned above. I am sending herewith the publishers' permission to reprint these directions in your pages, not neglecting to state that

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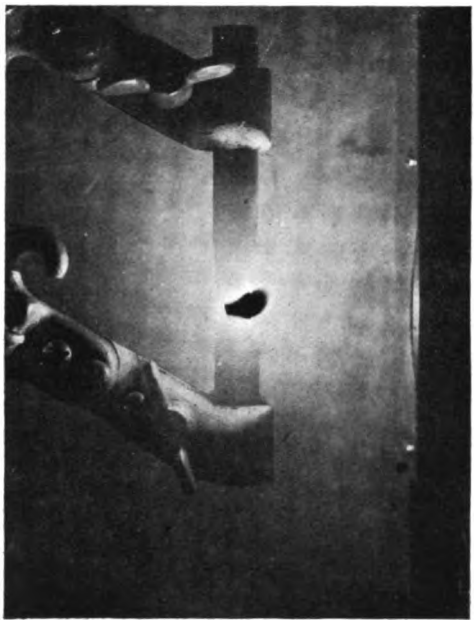
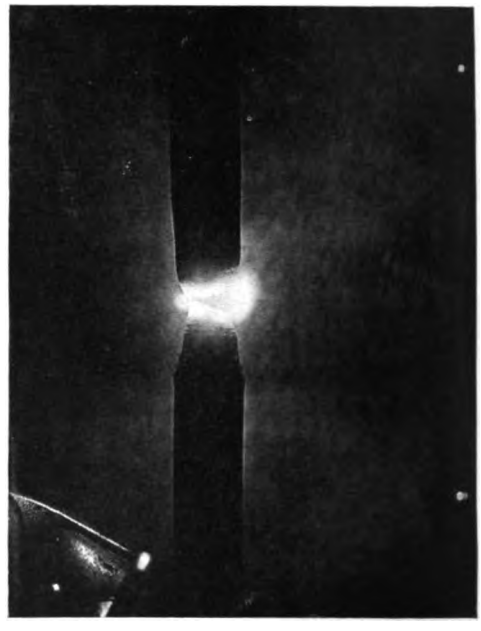


SHOWING REVERSAL OF ARC IMAGE



SHOWING NO REVERSAL OR HALATION

the matter is copyrighted by the American School of Art and Photography, under copyright date of 1908 and 1909. The directions follow:

METHOD OF DEVELOPMENT.

365. The entire success of this method of development lies in sufficient exposure, and as the latitude as to extreme exposure is so great we must strive only to give full time, as any reasonable amount of over-exposure can be treated in the development of the plate. In the wet-plate days we had less difficulty with these obstacles than we have with the dry plate. Why? For the reason that the emulsion of a wet plate was not one-fiftieth as sensitive to white light as an ordinary dry plate today; consequently, there was more latitude in the exposure.

366. Next to the wet plate we have the process plate, or the lantern-slide plate, all of which are extremely slow plates. For the lantern slide we require the clearest plate possible. The lantern slide must be absolutely clear and free from fog—shadows must be transparent. With the extremely rapid plate this would be impossible to produce except where the most accurate exposure is given, and even then the results are not as satisfactory nor uniform. While the extremely slow plate is superior for quality, yet for general commercial work the slow plate would be impracticable. In many instances quite rapid exposures are necessary to obtain certain results which could not be obtained with the slow plate, and therefore the most rapid plate must be employed and a means of producing the same results, as is possible with the slow plate, must be accomplished in the development.

367. As stated in the forepart of this instruction, the entire success of special development rests in the exposure. You must time for the most dense shadows, and time them fully; a little over-time will do them no harm, as the

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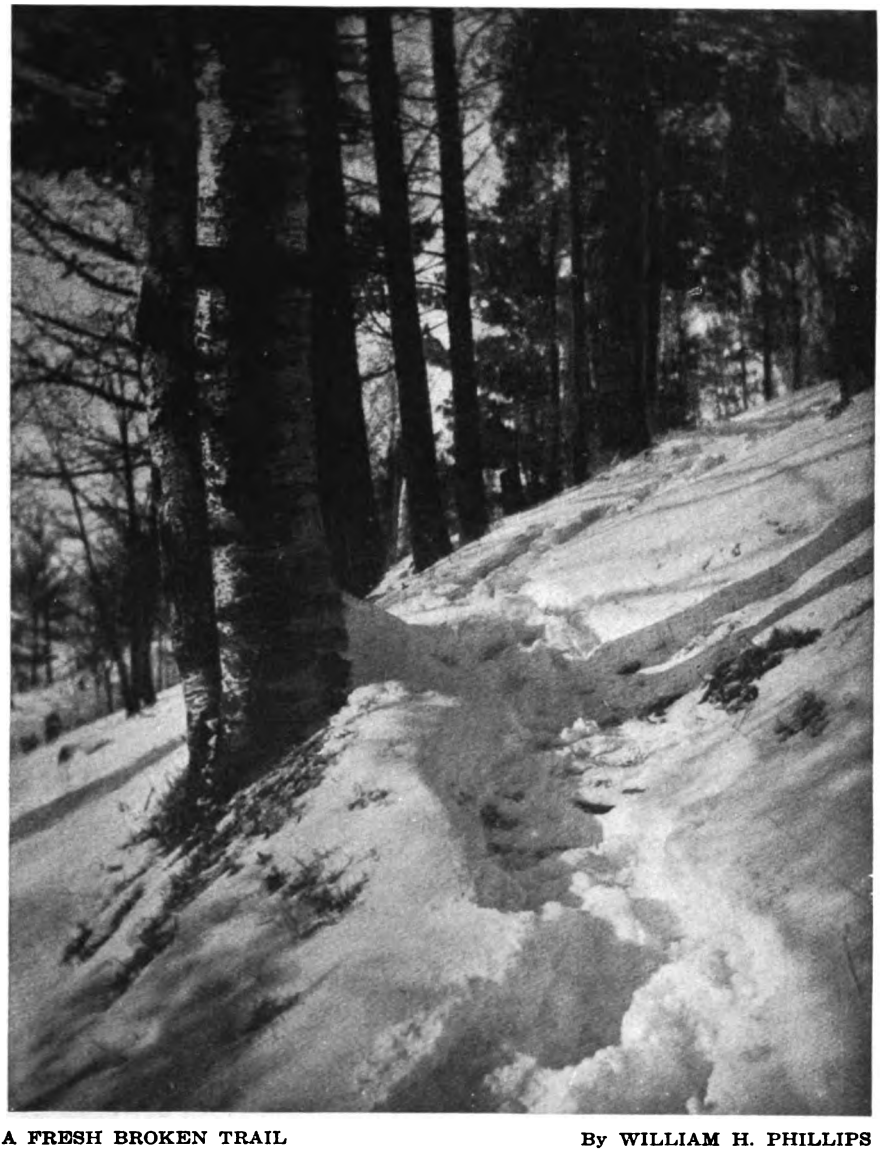

A FRESH BROKEN TRAIL — By WILLIAM H. PHILLIPS

over-time can be cared for in the development. By timing for the most dense shadows with this development the highlights will care for themselves, for you treat them in the developer so as to preserve them.

368. A good guide for exposure would be as follows: Where you would ordinarily give ten seconds, with this method give from thirty to forty seconds'

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exposure, etc. All the details in the most dense shadows must be supplied by the exposure, the rest you can obtain in the developing.

369. The slow process of developing, applied by this method, will, with a full-timed exposure on a fast plate, give you the same excellent results as a long exposure would give you on a slow plate in which the action of light upon the plate is so slow that it does not fog the plate. With a slow plate developed in a normal developer, all chemicals act equally, for there are no great differences to overcome, while in the fast plate there are enormous differences in the effect of light between the strongest highlights and the most dense shadows. In severe cases, by this method of timing fully the most dense shadows, the highlights would be extremely over-timed; therefore, in order to give us a well-balanced negative, we must restrain the highlights during development, and hold them in check until the shadows are fully developed.

DEVELOPING FORMULA.

370. Stock Solution No. 1:

Water	24 ounces
Pyrogallic acid	1 ounce
Sulphuric acid	8 drops

Stock Solution No. 2:

Sulphite soda solution to test 70 with hydrometer.

Stock Solution No. 3:

Carbonate soda solution to test 40 with hydrometer.

371. To develop: Take one ounce of No. 1, one ounce of No. 2, ten to twelve drops, no more, of No. 3, and add twelve ounces of water.

372. Before beginning to develop, let us consider again the nature and objects of each chemical used in developing. Stock Solution No. 1 is your pyro solution, or (developing agent) strength-producing agent. Stock Solution No. 2, sulphite soda, is your color-regulating chemical. Stock Solution No. 3, carbonate of soda, is your detail-producing chemical.

373. In ordinary developing, if you desire more contrast, you would increase your pyro, because pyro being your developing agent gives you strength, builds up your highlights. If your plate developed yellow in color, you would increase your sulphite of soda in order to retain the proper color. If your plate lacked detail, and developed too contrasty, you would add carbonate of soda, because it opens the pores of the film and permits the pyro to get to the shadows, and, therefore, is your detail-producing chemical. For this method of developing we have provided, by prolonged exposure, all the necessary detail; so all we require is to retain this detail and produce the proper strength. It is absolutely impossible to develop a plate without at least some alkali, or detail-producing chemical. It requires but a very small amount of carbonate of soda, yet some of this chemical must be used or the pyro will not attack, and the plate will not develop.

374. Ordinarily, we would desire to have the pores of the film open up, as it were, by means of carbonate of soda, thus permitting the pyro to act and build up and supply the strength necessary. In this case, however, we do not desire the pores to open, as we are already supplied with the detail by the

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exposure; therefore, we use only a few drops of the detail-producing chemical. merely sufficient to allow the pyro to develop the plate. The development will be gradual, and the shadows and highlights will build up gradually in their proper proportions, the plate remaining clear and crisp throughout the development.

375. After first placing the plate in this solution, it may require some three or four minutes before the image will appear. If it does not appear by that time, add three to five drops more of the carbonate of soda, or Solution No. 3. These additional drops of alkali will start the plate developing quite freely. After a few more minutes add a few drops more of No. 3, and again, from time to time, if necessary, until the plate is fully developed.

376. You must bear in mind that you have added so little of this solution that the pores of the film are not filled with the carbonate of soda, none of your lights or shadows are clogged or choked; your plate is clear throughout, and your developing has been deeper and more solid, and, therefore, is really developed farther than if it were developed in the ordinary way.

377. Should you find, after developing for some time, that the plate is apparently fully developed with good, clear detail in the shadows, yet lacking snap in the highest lights, and continuous developing does not seem to build them up, then pour off this solution and make up a normal developer according to regular formula for universal developer. (See paragraph 328.)

378. Immerse the plate in this normal developer for only a moment, examining very closely, for in the normal developer the plate will build up very rapidly. When you secure the proper strength, which should not require more than a minute or two at the most, rinse the plate in plain water, and finally fix in a plain hypo bath free from other chemicals.

379. As the developing of the plate by this method is quite slow, requiring fifteen to twenty-five minutes, avoid undue exposure to the ruby light, as you are apt to fog the plate by long development in too strong a light. It is advisable to cover the tray during development and only uncover when you wish to examine it. These precautions must be taken in order to insure perfect success. With care and patience, the most beautiful results can be obtained.

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One Way To Make Flashlight Groups

By A. K. Sinclair

Illustrated by the Author

If a mere beginner may be allowed to contribute to the columns of CAMERA CRAFT, I would like to offer the following description of how I overcame a difficulty recently encountered.

A few weeks ago I was asked to bring my camera and take a flashlight picture of a banquet which I was to attend. Not having a wide-angle lens, I found, when I came to take the picture, that I could not get all of the group on my plate. Then I hit upon what proved to be a most happy expedient. I first

exposed a plate to cover about two-thirds of the group from the left-hand side and then exposed another taking in about two-thirds from the right-hand side. This gave me plenty of duplicate picture and allowed me, later, to pick out a good place to make the joining where it would show the least. Making a print from each negative, I joined them by cutting along the outline of some figures in one print, shaving the edge thin, and pasting it in the right position on the other. Then I made a new negative by copying this print. The reproduction herewith shows the result. The prints were very satisfactory to all the guests, and I do not think any one except an expert photographer could find the line where the two original prints were joined. Even a photographer would not notice the joining if not told how the picture was made.

It occurred to me later that, the plan proving so feasible, it would be an excellent way to overcome still another difficulty sometimes experienced by the one who makes much of this flashlight work. He is sometimes called upon to take a picture of a banquet at which all the guests are seated at one long table,

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and the size of the room makes it necessary to take the picture directly from one end thereof. I have seen banquets in such rooms at restaurants and cafes. In order to get all the guests in focus, from those directly in front of the lens to those at the extreme end of the table, required a stop that would make it almost impossible to secure sufficient illumination without an excessively large flash. But by taking each side of the table separately, using the side swing of the camera to help out the focus, and then joining up the two resultant prints at the center of the table, a very good result could perhaps be secured with two small flashes, one for each plate. This would be much less objectionable than making one excessively large flash and even then not getting all the figures in focus. At least, that is the theory as it looks to me. I have not had an opportunity of trying it out, and would be pleased to hear from any one who should give it a trial, as I would like to know how it works out.

It would be well, I might add, for the beginner to profit by one mistake I made and use an instantaneous instead of a soft flash.

"AL" By GEORGE C. ELMBERGER

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Caricatures With a Camera

By William R. Inghram

With Illustrations by the Author

Some very amusing as well as interesting work, in the way of caricatures, may be produced by the aid of the camera and the ordinary photographic printing process. Situations entirely foreign to any known real condition may be brought about in a most realistic manner and to the infinite surprise of one's friends, simply by printing a picture from parts of two or more negatives. Post cards bearing these faked productions are easy to make and inexpensive, and they prove a source of wonder and conjecture to the recipient. The last pic-

FIG. 1 FIG. 2 FIG. 3

ture of the series herewith shows what can be done by the method described, and it should suggest an endless number of similar effects. The gentleman whose picture is reproduced as Fig. 2 is naturally quite thin, and his friends, who had not seen him for a few years, were surprised, upon receiving his portrait as shown in Fig. 3, to find that he had grown to large proportions.

The negative from which Fig. 2 was printed is at hand. It is desired to add considerable to the subject's avoirdupois. The natural thing to do would be to take a picture of a large man for the body to be shown in the finished caricature; but, the large man not being at hand, it is but little trouble to find his picture in some magazine or illustrated paper and make a negative there-

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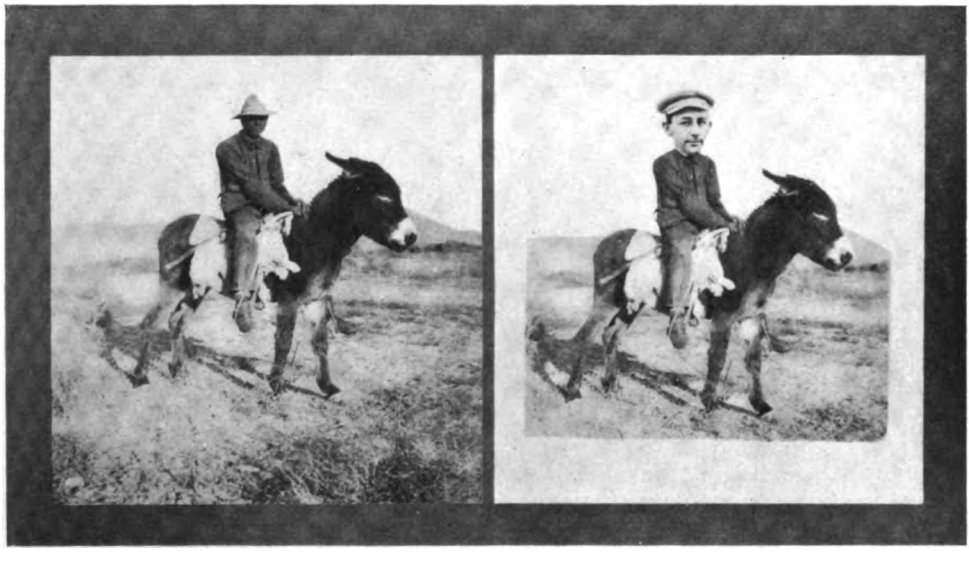
from. This done, the background and the body of negative printing Fig. 2 is blocked out with opaque, leaving only the head, the collar, and a part of the tie. The head only of negative from which Fig. 1 is printed, is blocked out in the same way. We are now ready to utilize the head from one negative and the body from another in the production of our caricature print.

The printing frame consists of a soft pine board, into which pins can easily be driven. The two negatives are placed one over the other, held to the light, and adjusted so that the head on one comes on the body of the other. Taking care not to disturb their position as regards each other, we place them on the pine board, with a small weight on top to prevent their shifting, and insert pins all about both to hold them in place. The negatives are then removed and a piece of printing paper fastened to the board with two other pins, so placed that they come outside of the area enclosed by the first set of pins. Negative Fig. 1 is placed in position, as indicated by the pins, and the body printed, after which it is removed and the other negative placed over the paper and the head printed,



THE ORIGINAL SNAP-SHOT RESULT WITH ANOTHER HEAD ADDED

the pins again serving to register the position of the negative. Pieces of black paper come in handy to shield portions of the paper not protected by blocked-out parts of the negative. When the print is developed, any mistakes or any lack of proper register discloses itself and can be corrected by the application of more opaque or by shifting the pins, before another print is made. If film negatives are used, it is only necessary to stick the register pins through one edge of each, as the film not being printed from can then be turned back out of the way while the other is being printed.

A suggestive list follows: A friend in the hands of a policeman. A large head on a small body. A grasshopper or beetle, as large as a horse, standing on the front walk. A horned toad, as large as an alligator, chasing a small boy. An enormous fish carried on a pole by two men. With the last a spring scale

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showing the weight of the fish heightens the effect. Photograph the two men holding the pole with scales hanging therefrom with a sufficient weight below to make it point at the desired weight, and then print in the fish from another negative. A cabbage, as large as a load of hay, on a wagon is one that is often seen. One can make himself or a friend appear as quite a stunning-looking personage by printing the face on a picture copied from a halftone fashion plate. You may dine at a table with a famous man or woman, providing you can find the halftone picture of the original dining-table scene in the magazines. You can easily become one of the actors in a scene from a prominent play. You may show an enviable picture of yourself shaking hands with Colonel Roosevelt, or you can easily put yourself in President Taft's shoes playing golf.

FEEDING THE GOLDFISH By J. H. FIELD

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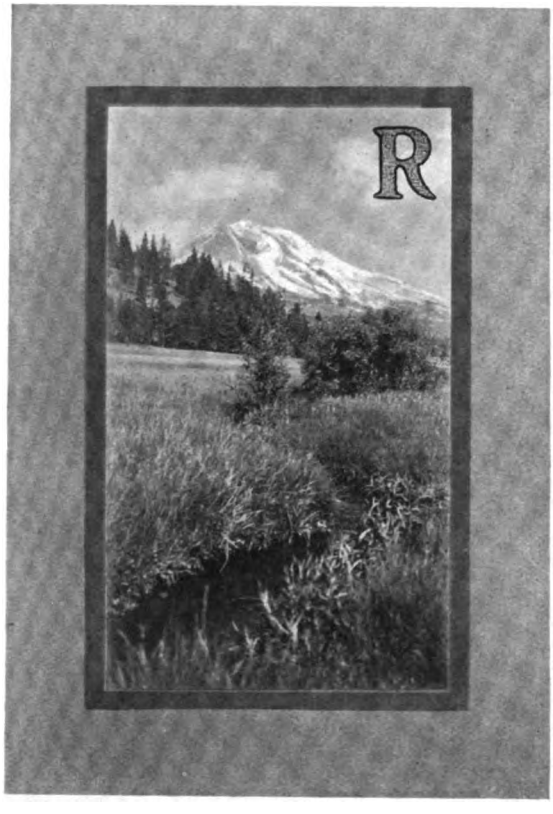
How I Title My Negatives

By I. C. Adams

With an Illustration by the Author



MOUNT SHASTA By PRES. FIDLER

RECENTLY, having a lot of titles to do, and wanting them to look neat, I naturally cast about for a satisfactory method. Not until I devised the plan I shall describe, was I completely satisfied; but now I have no trouble and I have the satisfaction of knowing the work is neat and the lines comparatively straight. Perhaps my method will fail to interest every reader; some may have a better way of doing the work; but I have found it satisfactory in the extreme.

I first got a box about fifteen inches long, a foot wide, and four inches deep. I drew a line diagonally across each end from the same two opposite corners and sawed the box in two along these lines. If the box is deeper than four inches, the inclination of the top of the desk-like halves will be too great and it will be hard to work on it with comfort. Retaining the better half of the box, which happened to be the bottom, I cut an opening, 2½x6, in what was now the top, using a portion of the lid to form a bottom in the box or desk, this bottom extending forward as far as the nearest edge of the opening. The back of what was then a desk was next removed and a sheet of white paper laid on the bottom to reflect the light upward through the negative. The desk is used on a stand or table with the high side or back away from the worker, with the negative over the opening. A large piece of cardboard above the desk, back of the opening, will keep the light from the eyes and prove quite a comfort.

To prepare the negative, take a piece of glass or heavy celluloid (the latter

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is better, as it won't scratch), and cut it one-eighth of an inch smaller than the paper to be used. Suppose one be printing postal cards which are 3½x5½; the form will be 3⅜x5⅜. Turn the negative over, lay the form on the glass side and move it around until it covers the desired portion of the negative, then take a negative marking pencil and draw a line along the left side of the form and one along the bottom. Shift the form up about an eighth of an inch and

draw another line along the bottom. This last line is the one to follow in writing the title. Turn the negative over, lay it over the opening in the stand and, with a clean steel pen (I prefer a 303 Gillott or Spencerian No. 1), write the title on the film, using Higgins' waterproof ink. Remember to commence at the right hand side of the negative as you look at it, and write toward the left, and to make the letters wrong side around, or reversed. With a little practice one can do this nicely; and, as the lines are straight, such titles add to the appearance of the print rather than detract. After the title is on, turn the negative over, and, with a damp cloth or tuft of wet cotton, wipe off the pencil marks and the trick is done. In case a mistake is made, the ink may be readily removed by wrapping a bit of cotton around a match or toothpick end, wetting it in alcohol, and rubbing it over the letters to be removed.

In art there is nothing immoral but that which is ugly, base, false, common, or, as the Greeks would have said, offensive to the Graces and the Muses. The effects of art should not be intentionally moral, but they should be noble. The origin of the fine arts is ideal, and their whole object is the glorification, the elevation, and the consolation of man.—THEODORE CHILD, in "The Desire of Beauty."

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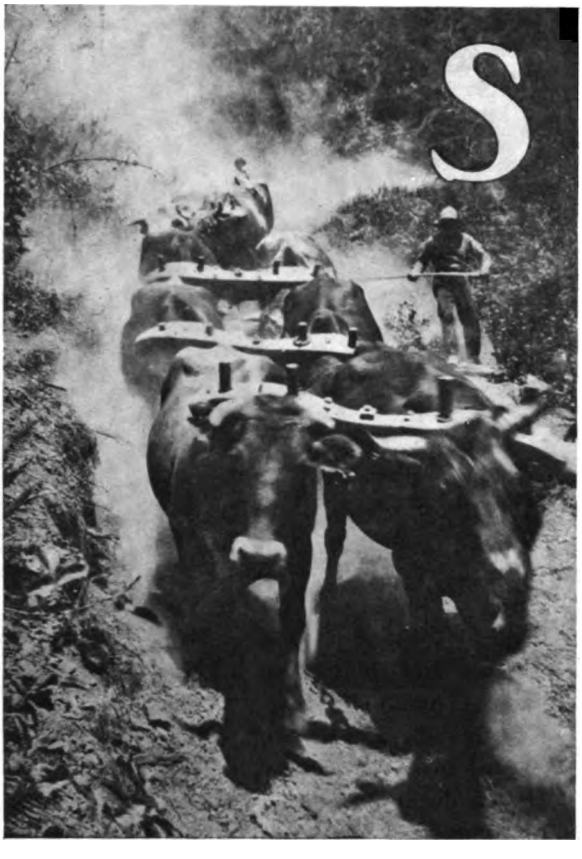
A Few Stunts To Bring In The Coin

By Paul Craver Hanson



A LOGGING SCENE By MRS. E. A. CORWIN

SOMEWHAT slangy, but there is a sort of a jingle to that title. What?

I look with awe upon the man who produces the salon and convention creations, and can only hope to do some of them myself, some day. Just now I am only a commercial photographer and, therefore, more interested in the money-producing side of our craft. And I think the most of us are so interested to some extent. I wish to give other photographers the benefit of some of the schemes that I am working, or have worked, with success.

You have no doubt read that stereoscopy is once more becoming popular. Get a stereoscopic attachment for that 5x7 camera of yours, or invest in a regular stereo camera, and make the most of the revival. Mine, by the way, is a No. 2 Stereo Kodak. Get some 3½x7 cards and "go to it." People buy them; every one has a stereoscope buried in the attic or up on the book shelves. It is so common that they have forgotten it is there, but the one that dusts off those shelves knows it is there, I'll bet.

For subjects, select points of interest to the local public—the library, the postoffice, city hall, and views in the parks. Pictures of some of the town characters are always interesting, and every town has them. Try to get people in the pictures, near the camera if possible; it helps out the stereoscopic effect and adds interest, human interest. In printing, use a mask that will let the prints trim with a narrow white border line all around. If you do not understand stereoscopic work, I would advise the getting of *Photo Miniature* on the subject. You can sell these stereoscopic views to the dealers in your town at a price that

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will give you a good profit. If you have only a few dealers, you can afford to furnish each one with a stereoscope so that customers can view the pictures on their counters.

Another good plan is to look up your negatives of places of interest about town and get them all together. Your friends with the camera fever will probably lend you their best local view negatives. You will find a well-composed bit, 3¼x4, somewhere on nearly every one of them. Make lantern slides,—by contact it is quite easy and simple,—from these negatives, and mount and bind them in the usual way. There is a *Photo Miniature* covering that subject as well; or, write Burroughs, Wellcome & Company for a valuable little booklet they get out and send free, covering the subject. Make up a set of fifty, or even twenty-five, and put them in a lantern-slide carrying box.

Then send out notices to your Commercial Club, Civic Division of the Woman's Federated Clubs, the different lodges and the like. Tell them that you have a set of lantern slides of your city and ask them to kindly bear it in mind when they are in need of anything of that kind. They will need something to fill out from time to time. The set will cost you very little to prepare, and it will rent for a good sum per night. You can, no doubt, also rent the slides to your local "moving-picture man." These moving-picture men like slides showing recent local events, so be on the lookout for pictures of parades and speakers' stands when there is a convention or meeting in your town. Quite a number of post cards can be sold from these same negatives having interest for those taking part, and the editor of the town paper always wants pictures of local interest if they are gotten to him promptly.

And here is another good stunt. Make up a few prints from your best negatives of subjects of general interest to the public at large; something that one would not tire of too soon. Typical farm scenes, workshop interiors, ice harvesting, hunting scenes, marine views, and things that are easy to get out in your part of the country. Send these, unmounted, to some of the calendar concerns. Write them something like this: "I am sending you, under separate cover, photographs printed from some of my negatives, which you may be able to use for calendar illustrations. If you decide to keep any of them, do so at (here name price) each. The others you may return to me, using enclosed postage."

Do not set your price too high. You will be disappointed a few times, but the postage is not much. I sell quite a few pictures in this way, and—have my own disappointments. One of these last is before me now. They decline those sent, but say they will need pictures along the same lines in the near future and will let me know their needs at that time. It cost me only the six cents for postage, as I already had the pictures, and an order will come later.

If these few suggestions get past the editor's trash heap and into the magazine, you may, gentle reader, hear from me again.

Art faculty is innate; it cannot be acquired. It is a moral and intellectual force which may be enhanced by cultivation, but cannot by any such means be created.—SEYMOUR HADEN.

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A Day With The Wild Flowers

By F. Belmont Odell

With Illustrations by the Author

UNFOLDING FERNS

EARNEST amateurs, after mastering the ordinary technique of photography, frequently tire of the usual subjects and experience a desire to branch out into some special field. The aspiration seems to work down into the consciousness of the individual and then seeks an outlet; his camera leads him toward the things which appeal to him, his personality trying to find expression in the portrayal of the things he loves. The amateur who has arrived at this point in his favorite hobby will be amply repaid in pleasure and profit for specializing in flower photography. The world presents no subjects more worthy, none so delicately elusive in the matter of recording their natural beauty. The writer is himself somewhat of a novice in this line, and the fragments of advice herein given are offered beginners in the hope that they may help them over the plate-spoiling and discouraging days.

The wild flowers growing unnoticed by the wayside are particularly appealing and have a charm all their own. It is surprising what a wealth of material one can find in a day's ramble along the fringes of woodlands, by the meadow brooks and in the marshes. Buds and blossoms come and go, followed by seeds and fruit, hundreds of different kinds, curious, beautiful and artistic, all instructive, all interesting. Some of the fungi and lower forms of vegetable life are full of interest to the nature lover.

To work with comfort one should have a small camera, one that admits of ground-glass focusing, orthochromatic plates and a ray filter, and he can wisely add a supplementary portrait lens and a small reading glass, the latter for fine focusing. The best results will follow the curbing of the natural inclination to wander aimlessly over a wide expanse in search of "worth-while" subjects. They are right under one's feet if he can but see them. A patch of woodland

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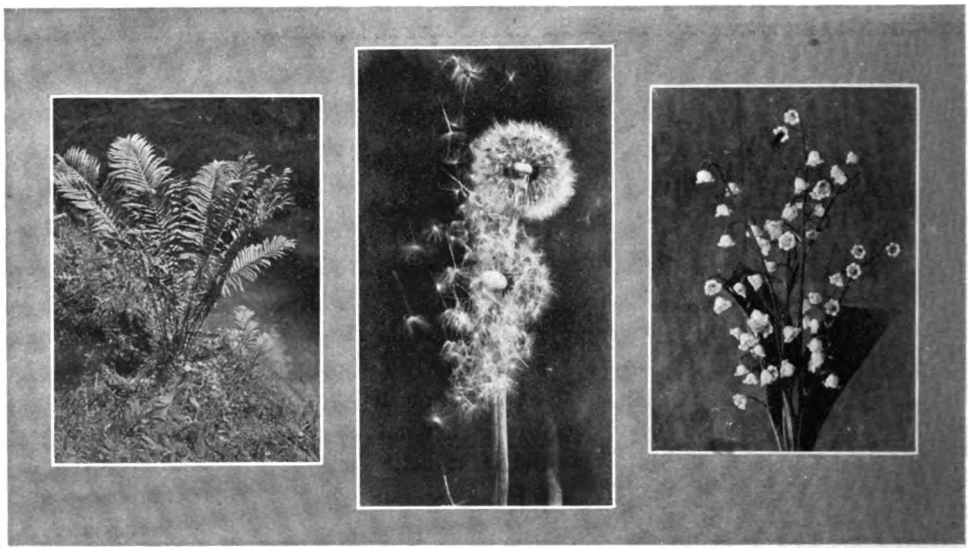
bordering upon a meadow, and preferably one with a small stream of water, should be selected; there one will find material for a whole day's fun if he be observant and not too hasty.

Many of the aquatic plants can be photographed in their native environment, thus adding to the charm of the picture; a group taken on a somewhat broad scale, showing the habits and manner of growth, is full of interest, while single specimens at close range present some difficulties not encountered in the general view. It is one thing to select an interesting patch of plants, set up the camera and make an exposure of, say, one twenty-fifth of a second; it is quite another thing to make a satisfactory picture of one or two stalks with the lens within twenty inches of the subject, the wind tossing it about, one having stopped down to U. S. 64 in order to get some sort of focus on the different planes covered by a sprawly plant. This last is quite easy, too, com-



"THEY ARE RIGHT UNDER ONE'S FEET IF HE CAN BUT SEE"

pared with the still further necessity of the use of a ray screen to equalize the exposure on a flower having several colors and shades. Then, again, stumps and stones have a persistent habit of getting in the way. Blasting powder would remove them, doubtless, but a simpler remedy is to slip a portrait lens over the regular one. This will put almost any stump or rock out of business, photographically, either by excluding it from the field of the lens or by throwing it so far out of focus that it will appear in the print as a dizzy spectre. Sometimes a focus cloth behind a flower helps to exclude obnoxious objects. It may be held by an assistant or supported by two sticks driven in the ground. It is frequently an advantage to move the cloth slightly during the exposure to destroy any tendency of the wrinkles to show.

Some varieties of wild flowers can be handled best indoors, and such should be gathered and brought home where the light is controllable and a more suitable background can be arranged. This last should be deep drab in color and of fine texture, without wrinkles or seams. Few flowers photograph well

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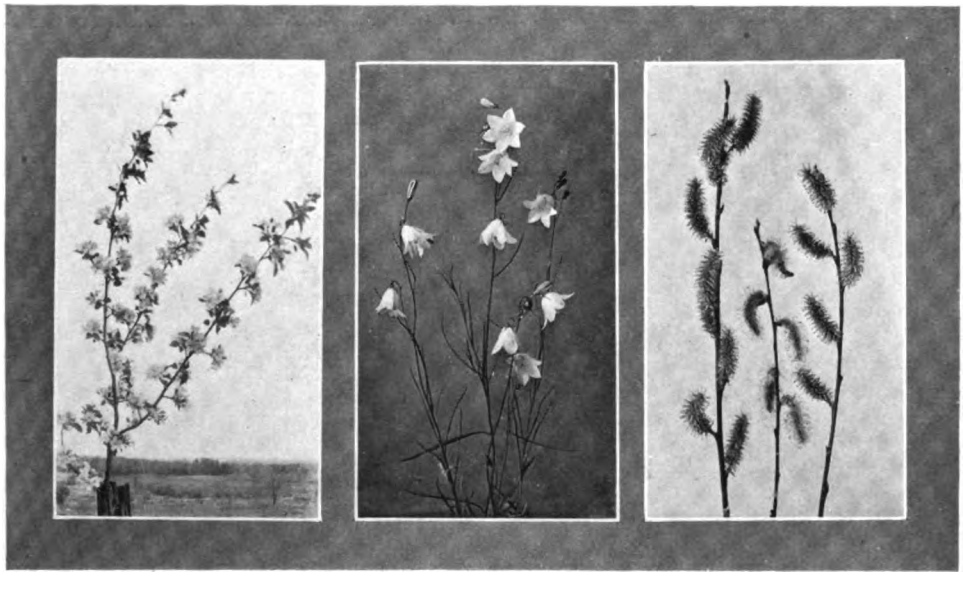
against black. A lighter shade is suitable for red blossoms with green foliage, but a pure white often gives a cut-out appearance, the negative coming out perfectly opaque. This can be avoided by swinging the ground away from the light, thus darkening it and preventing reflections. The writer has a convenient home-made ground, one of light, soft wood, dove-tailed at the corners to form a frame three feet square. A yard of drab silesia, from which the sizing has been removed by soaking in hot water, is stretched and tacked on one side with a yard of cream-tinted muslin on the other. A metal socket is attached to the center of one side of the frame, permitting of its being screwed on a tripod in the same manner as a camera. This gives a choice of two backgrounds on one frame, which can be instantly swung or tilted to any angle as well as raised or lowered to any desired height.

A room with a northern exposure is most suitable for this class of work.



THEY ARE SHOWN AS EXAMPLES OF A BEGINNER'S WORK

The light should strike the subject at a downward angle from the side, a little to the front, and from one source only. The earth is illuminated from above, and a picture which represents or suggests lighting from any other angle is grotesque. Aim for good definition over all parts of the flower on the ground glass, stop down until this is secured, but do not destroy atmosphere by using an extremely small aperture.

Simplicity is the best word in the dictionary when it comes to the arrangement of flowers. The novice is inclined to be over zealous, aiming to get quantity rather than quality. This leads him to form complicated and impossible groupings until some experience teaches him better, but this article is intended for those without experience. Vases still further complicate the arrangement and they had best not be included in the picture until the worker has acquired the requisite skill and artistic taste to use them to advantage. A large jardiniere filled with wet earth or sand will answer for a retainer, the

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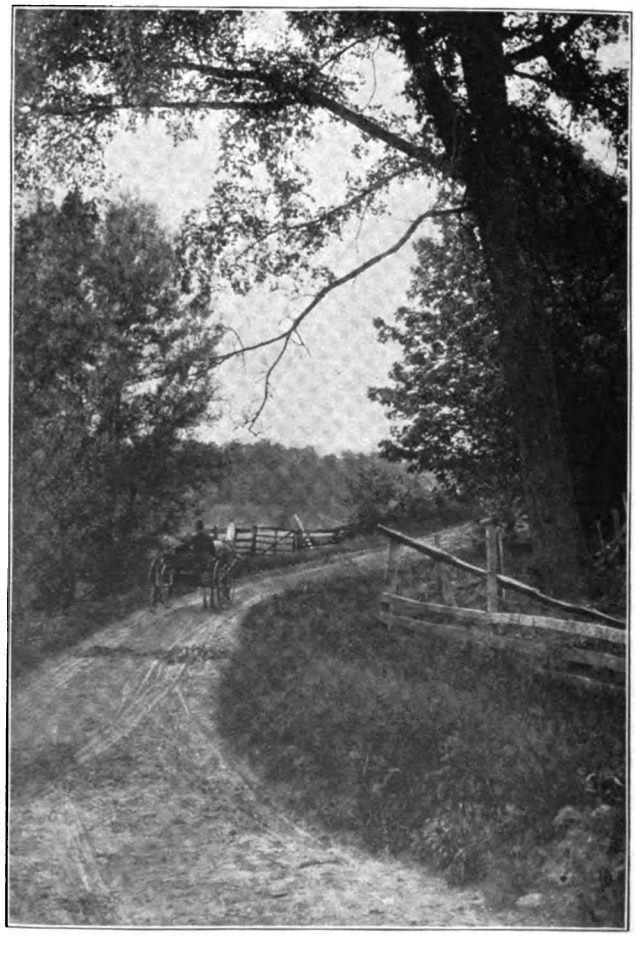
stems of the flowers being cut squarely and pushed down into the sand will stand upright, while the large surface available helps to avoid bunchy effects. If the floor is bare, the tripod will often sprawl and topple after one has spent fifteen minutes in arranging and focusing. A small rug placed on the floor will prevent this vexing occurrence. Some use corks stuck on the tripod tips, but the rug is safer.

It is difficult to give more than general hints concerning exposure, so varied are conditions governing them. The data of the accompanying illustrations will serve as a guide at the start. They were all made in June, three o'clock, sunny day, with the light of one north window. Cramer's Iso medium plates, post-card view camera fitted with anastigmat lens, and twenty minutes' tank development. They are shown as examples of a beginner's work rather than as object lessons in flower photography.



A TURN IN THE ROAD By WALTER WIRT

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Which Plan Are You Following?

By Lawrence Siebeneck

With Illustrations by the Author

"Give us this day our daily bread" is all very well, but if one will pray for more photographic information, and then apply that which is so easily obtained from the magazines of our craft, he may have the added pleasure of eating jam on the bread. It is strong recommendation of photography as a profession that so many can obtain their daily bread thereby, while following the plan, if plan it can be called, upon which they conduct their studios. Their doing so makes it almost an assured fact that the photographer who follows a more businesslike plan will be rewarded with more than the necessary amount of regular sustenance. Let us compare the two plans.

The display case gives the prospective customer his first and perhaps strongest impression. It may be used as a sepulcher for dead flies and other ornamental bugs, conveying the idea that it is a museum exhibit. Perhaps there is no connection between bugs and photography, but we will not cavil at that. Keep on, it makes business—for the other fellow. And it certainly makes an impression on the prospective customer. An impression so strongly repugnant that it influences and intensifies the favorable impression that the next case makes. This other one is dressed anew each week. The proprietor secures thirty or forty assorted card mounts and novelties from his dealer, fixes them all up in about the same time it would take to fix just enough for one change, making it easier to get them all of the same tone and quality, and finds that he has enough to dress the case a number of times, perhaps making the suggestion of a museum exhibit unnecessary. A good display in the street case and window is, nine times out of ten, the most inexpensive and most profitable form of advertising the photographer can do. Old, faded pictures, obsolete styles of mounts, these are worse than no display at all.

A dirty flight of stairs, and here we are, sure enough. Here is where we step into the reception room. Isn't it a dream of paradise? There is a strange atmosphere, art atmosphere no doubt, pervading it. An assortment of pictures undergoing the dry sepia toning process adorns the walls. A cuspidor is acquiring an oxidized finish in one corner. It would be sacrilege to disturb either it or the pictures at this stage. But in the other studio they are not hampered by traditions. The samples are kept in a few neat, strong boxes. These are always clean and the price is plainly marked on the back of each one. Frequently a customer does not like to ask too often as to the prices. He feels that he is giving the impression that the price is the main consideration; but with each sample marked, he has only to turn it over to obtain the desired information. One can believe that the floor covering is on speaking terms with a

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broom. "Sweet sixteen" or a June bride, garbed in white, could safely come in and find herself able to leave without changing the color of her apparel, even be the white apparel not in the form of a harem skirt. And one other difference is quite noticeable; the proprietor has learned that the combination of a polite little greeting and a smile will not endanger either his vocal cords or his facial elevation in the least; in fact, he finds they help business along.

But let us return to the first studio. Here we are, right smack in front of the operating room. Yes, it is plainly labeled, "Operating Room," in large letters so that every one will know just what he can expect. One photographer who did this had an unfortunate experience with a nervous individual who thought it was a real surgical operating room. But then, everybody is not nervous. We are not, so let us enter. No, Rolla, the light is not coming through shingles worn thin by the elements. That is a glass skylight that has not been cleaned since it was put in. The accumulation of dirt does suggest worn shingles, but it is really made out of glass. Our more businesslike photographer keeps his skylight clean. It lets in more light and the effect on his visitors is more creditable. He keeps up a pleasant conversation with his sitters, and yet does not act the part of a combination photographer and windmill. He knows that dry plates do not cost so very much and finds it is profitable to make a few extra poses, particularly if asked to do so. Back in that other studio the operator does it differently. If the sitter has some preconceived idea as to how the pose should be, he tells her that he is an artist and knows how to pose correctly, and that in carrying out her ideas she would be entirely too "wooden." She appreciates the information so much. A group went into a studio of that kind recently, and, on suggesting a certain pose and arrangement, the photographer asked: "Aw! what's the matter with you?" The trouble must have been with the one making the query, because he lost a good order.

You are, by this time, in a position to determine which of the two plans you are following. It is needless for me to further identify or distinguish between the two. I can better use the remaining space to give a few hints and suggestions as a result of my own practice.

Avoid, as much as possible, the making of full-length pictures of persons who are quite tall, and a lady whose skirt does not touch the floor will not be pleased with a full-length pose. Background catalogues and the illustrations in the popular magazines suggest some very effective poses. Fancy poses are rarely asked for, yet when I have a subject that I think will show up well in some certain pose I have in mind, I make a negative, and when the proof is shown it seldom fails to effect an order. Besides, it gives me something special for the display. Sometimes a full-length pose is demanded despite the fact that it does not look well. Throwing the weight of the body on one foot will often improve matters greatly. Three-quarter standing poses of ladies should be made with the body having a slight forward inclination. But above all, do not get "old-fashioned" and stereotyped in your poses. Try to get variety and always have something new to present. Keep up some kind of a conversation when posing and do not embarrass the sitter by standing and gazing at her.

Photographing children is very fascinating work, yet full of difficulties

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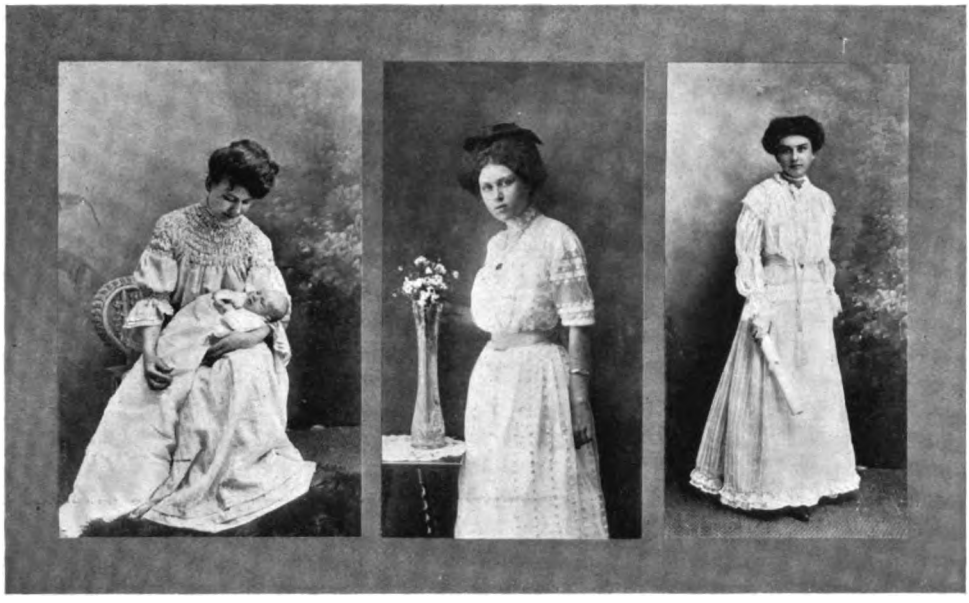

THE EVERYDAY WORK OF THE AUTHOR'S STUDIO

The first commandment is: Secure the child's friendship. After that, all is easy. Have everything ready before the child enters. If the child is posed as busy with some toys, nine times out of ten the picture of "the little darling" will have the approval of the fond parents. A stock of toys should always be kept on hand. A box of dominoes, toy animals, a miniature train of cars, a horn that can be blown, those and other things will prove of priceless value. If you cannot attract the child's attention in any other way, light a piece of paper and see how intently the flame will be watched. Always make a series of plates, and then, when the proofs are shown, there will be a larger order through the parents being unable to resist the varied poses. In making groups

EXAMPLES OF STRAIGHTFORWARD STUDIO WORK

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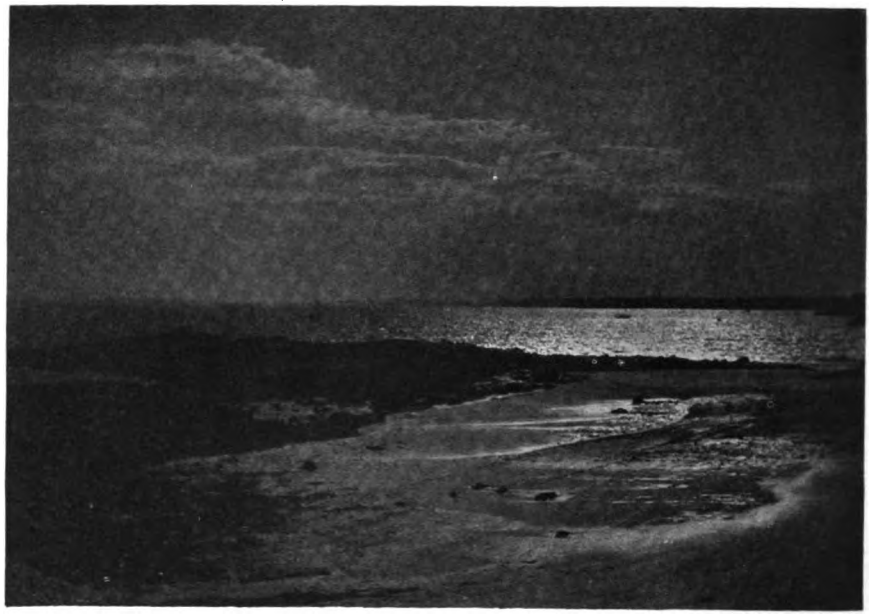

LAND AND SEA By F. H. OLIVER

of children, a picture book comes in very handy. For little girls, a small table arranged with dishes forms an excellent point of interest at which they can be grouped, and around which they will assume most natural poses. A small set of mission furniture is just the thing for children. And do not forget that girls like dolls.

It is a good plan to use more styles in 4x6 and 5x7 portrait poses. And why? Because the post-card picture has changed the standard of value in picture sizes. The cabinet looks too near the post-card size, but the larger size will sustain a present good price and permit of a poor price being raised.

Whenever possible, induce the sitter to come personally to the studio for his or her proofs. If the proofs are mailed, the recipient is more than likely to notice some disagreeable little feature that could be easily explained were the photographer at hand. But most people know very little about the possibilities of photography; they imagine the finished pictures will be as unsatisfactory as the particular proof objected too, and the order is either made smaller or lost entirely. If the sitter calls at the studio, the proof can be shown on first this and then that style of mount and a suggestion made as to the most desirable. If there are several poses of the same subject, the customer can be shown how well they will look made up as a combination card. These combination cards should be shown and explained whenever possible and made a means of bringing money to the studio that would otherwise be lost.

A profitable scheme for the studio is to keep a record of all the births, putting down the name, age, birthday, and address. All this can be obtained from the local register. A few days prior to the birthday of each child, send the parents a photographic card on which has been printed a good child pose,

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and on it write: "Lucile will soon be two years old," or as the case may be, "and why not have her portrait made in memory of the event?" This plan works admirably. It is also a good idea to keep as close track as possible of approaching nuptials, and just a few days before the ceremony send a neat little letter to bride and groom, expressing hearty congratulations. At the end, in a very few words, one can mention how well he is equipped to take bridal pictures. The attention is always appreciated, and the little statement at the end of the letter brings some good business to the studio.

When an accumulation of negatives becomes so great that one must dispose of them in some way, put it off for awhile and insert a small advertisement in the local paper, one stating that you must destroy them for lack of room, negatives made during a certain period, but will hold them for a month, during which time re-orders will be accepted at a certain price. One will be surprised at the number of orders that will result. From the negatives from which the better class of work has been done, proofs can be made and mailed to the prospective, together with a letter explaining the matter in a little more personal manner. If one sees fit, it can be explained that as a negative is already made and properly retouched, the duplicates will cost a little less than the regular work.

As to the regular advertising, short, catchy newspaper "locals" of three or four lines generally prove very effective. "Your friends are saying: 'Wish we had a photo of her.' Then why not have some taken at Snapshutter's

THE PATH BY THE RACE — By FRANK B. HARGETT

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Studio?" "Daddy wants baby's picture now. Special styles and special attention for the little ones at Snapshutter's Studio." "A photograph will keep the family together; the time is now when they are all together." These are, of course, only suggestions. The photographer can write them to suit himself. A neat display advertisement, used in connection with these "locals," will prove effective. If illustrated with a cut, particularly of a portrait of your own making, so much the better. The cuts cost very little and should be ordered of such a "screen" or degree of fineness as to print properly on the paper used. But the best plan is to arrange with the editor to furnish him with a series of photographs to be published for their local interest. Picnics, parades, fire scenes, the county fair, social gatherings; in fact, there is an endless supply of subjects that will suggest themselves to the wide-awake photographer. To these can be added a few words about one's work, and, as they are in the nature of news illustrations, if furnished promptly, the editor will generally give quite a reduction from his regular price for space.

But do not get the idea that printer's ink will do all the advertising that is needed. Each dozen photographs that one puts out are an advertisement for or against his studio. As I suggested early in this article, the display case is a vital element. And one's manner is also quite important. Do not "knock" your competitor. Speak well of him to your customers. Have but one price for your work, and make that price to everybody. In short, conduct your studio in a businesslike manner and yourself in a gentlemanly way, and you will succeed.

But enough, sufficient, plenty. At least, for this time.

A STEREOSCOPIC PORTRAIT
By F. MORRIS STEADMAN

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STEREOSCOPIC DEPARTMENT

Stereoscopic Photography

By Morgan P. Burke

The editor insists that what he wants is a short, practical article; but, at the risk of having this effort declined, I am going to have my say in behalf of stereoscopic work, and the practical part can follow at the end.

The major portion of the army of amateur photographers is made up of ordinary individuals who take little or no interest in art; that is, photographic art. They use their cameras to produce photographs of the scenes about them, and they want these to look like photographs and "look like the place." And if the individual members of this large majority could be shown the beauty of a well-made stereoscopic slide, a large number of them would at once become enthusiastic stereoscopic workers. Could I, with my small stock of technical skill, take them individually and show them how simple and easy it is to produce a picture that, viewed through a stereoscope, presented the scene in all the beauty of correct perspective and solidity—well, the factories would have to work overtime making stereo cameras. And that last reminds me that it is on the purchase of a new camera that some workers draw the line. But they need not do so. A 5x7 camera is a good, serviceable size, and a 5x7 stereo camera is simply an ordinary camera made with a wide front board to accommodate the twin lenses. There is a septum that can be inserted or removed in a few seconds, and all one has to do is to remove the septum, exchange the front board carrying the twin lenses for one carrying a 5x7 lens, and he is ready for 5x7 pictures. I always have a good 5x7 lens with me and it takes but a minute or two to make the change.

But my most frequent variation from stereoscopic work consists in capping one of the lenses and exposing but half the plate for a lantern-slide negative, capping the other lens and making the next negative on the other end of the plate. These single exposures are just the thing for lantern slides and they are just the size for good enlargements. In fact, the ordinary stereo or double negative is an ideal one for that same reason. In addition to being stereo negatives, they make excellent enlargements and lantern slides, for the reason that one has two negatives from which to select. If there is a pinhole or two on one, the other will most likely be perfectly free from any defects. And that is the one to use.

The worker can see that he is really not buying a special camera for stereo

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work, but he is buying a good, all-around instrument. And the matter of lenses can also be reduced to a very simple matter. In the nature of things. a good stereoscopic subject generally presents a dished field to the lens. The foreground always comes towards the camera. Frequently there is an overhanging bough at the top. One or both sides of the view approach the camera in nearly every instance. The result is that the view is much as if arranged on the inside of a large bowl. This at once suggests the value of a lens having a round or curved field. And that lens is the single-view lens, with the cheaper rapid rectilinear lenses a close second. Those are the lenses to be used. That is, as long as speed pictures are not wanted, and that class of work is hardly what the stereo worker desires. The shutter, also, need be but the cheapest form that is fairly reliable and not inclined to get out of order.

In making stereoscopic pictures, the first consideration, after the selection of the view, is the proper disposition of the foreground. The foreground is all important in this class of work, as it is by having something in each of the several planes of a picture that adds to the charm that stereoscopic representation gives. The camera should be kept low; and for foreground matter one may include a clump of weeds, a few rocks, or the like; even a dog quietly resting in the immediate foreground adds greatly to the picture where an open expanse is otherwise unbroken, as in the case of a roadway taken from near its center.

Stereoscopic negatives should be rather soft and full of detail, even in the deepest shadows. Chalkiness in the highlights is also fatal. The negative that makes a good, strong print, such as commercial photographers find most acceptable by their customers, is entirely unsuited to stereoscopic work. Many good stereo prints look quite dead and flat except when viewed in the stereoscope. And this, again, is an advantage. The right kind of a stereo negative makes a fine stereo print on Solio paper, the kind most workers find the best for the purpose, and the same negative makes an excellent print for ordinary work on developing paper. And any worker knows that such negatives are just the kind for the best results in enlarging.

All in all, the ideal outfit for the serious worker who desires to produce good photographs of the friends, the home, the scenes about his home or in his locality, or of the places which he may visit, is a 5x7 stereoscopic camera fitted with a good 5x7 lens and a set of stereoscopic lenses. With this, and the ordinary skill required to produce ordinary good negatives, he will constantly be adding to his stock of good results. His negatives can be used for stereoscopic slides; one of the twin pictures on the end of a post card, with a few words of greeting on the other, serves the purpose better than a full-sized post-card print; the same half negative is just the right size for good selection of subject for a lantern slide; and they are neither too small nor too large for the best results by enlarging. The stereoscopic camera is certainly the ideal one.

What we most need is not so much to realize the ideal, as to idealize the real.—F. H. HEDGE.

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

FIXING PRINTS: When fixing prints, the trays take up a lot of room. So the best way I found was to use a washing box. Divide into compartments by putting pieces of glass to fit into the box, placing them the same way as when washing plates, but with enough space between each glass to let a print fit in there. Then pour the fixing bath into the box. This saves lots of time and requires less space.—Emil R. Moller, Illinois.

CELLULOID VARNISH: Those wishing to make celluloid varnish, who find it difficult to obtain acetone in which to dissolve the celluloid, will find they can arrive at the same result by using a solvent consisting of: Ether, seven parts; grain alcohol, five parts. These two chemicals can be purchased at any drug store and the celluloid may be obtained by cleaning the emulsion off of some old kodak films. This last is cut into small pieces and placed in the bottle, where an occasional shake and a little time will cause them to dissolve. The right proportion is about one hundred to one hundred and twenty grains of the celluloid to twelve ounces of the ether and alcohol as above. The varnish has a slight yellow tinge, but the film applied is so very thin that the tint is not at all perceptible.—T. C. B., South Dakota.

BORING HOLES IN GLASS: In the August number a correspondent gave the only practical method, but left out two very important points, namely, the support and how to make the drill. When drilling glass, one must have a small support or the pressure on the glass will be sure to break it. Place a piece of cork, a quarter of an inch thick and half an inch in diameter, directly under the point at which the hole is to be drilled and there will be no difficulty encountered from breaking glass. For the drill, take an old triangular file and file the soft end (the handle end) to the required shape; then heat to a red heat and plunge into water to temper it. This produces a hard point, which can be renewed as often as desired. A little camphor gum dissolved in the turpentine makes a better lubricant than plain turpentine.—Jay Barton, Missouri.

LEMON JUICE EFFECTIVE: A few minutes ago I found an ugly brown stain on one of a batch of newly made prints which I had just dried. Having no oxalic acid at hand, I tried the application of lemon juice, putting it on with

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the tip of my finger and removing it with wood alcohol. The stain disappeared almost immediately the lemon juice was applied.—A. K. Sinclair, Michigan.

LABELS: Write your labels, paste them on the bottle, then cover with paraffine wax, melted, and applied with a mucilage brush or with a swab of cotton on a match. Warm the bottle so that you can spread the paraffine smoothly before it hardens. Thus protected, the labels will stand water and chemicals and always be clean.—C. R. Lowe, Iowa.

STOPPERS: Excellent "corks" for large-mouthed bottles in which dry chemicals are to be kept can be made by cutting a piece of newspaper into strips an inch and a quarter wide and rolling them into a tight roll large enough to fill the neck. Then take some oiled paper such as package crackers are wrapped in or the paper wrapping next to post cards when bought in bulk, lay it over the mouth of the bottle and press the roll of paper down tight. Next take a strong cord and tie it around the roll and oiled paper together just above the top of the bottle. If you have a little glue at hand, spread some over the top of the roll and lay on this a circular piece of paper. This will help to keep the center of the "cork" from pushing down; but if the roll is tied tightly, it is not necessary.—C. R. Lowe, Iowa.

TEST FOR HYPO: It might interest some amateurs, just starting, to know that a good test for hypo is a glass of water containing three or four drops of the following solution:

Permanganate of potash	2 grams
Caustic soda	2 grams
Water	2 ounces

Let drippings from the plate or print fall into the dilute solution. If hypo is present, the violet of the potash will change to light green in a few minutes. —Thomas D. Moore, North Carolina.

Our Frontispiece This Month

For the information of our readers who may be considered "land lubbers," as well as for yachtsmen not familiar with yachting conditions on San Francisco Bay, we would explain that the canvas carried by the yacht pictured has not the proportion and expanse seen in pictures of the pleasure windjammers of the great lakes and the Atlantic Coast. There is no place in the world where is enjoyed such perfect yachting weather as maintains on San Francisco Bay. From the first of May to the first of September, there prevail the counter-trade winds, blowing from twenty to forty knots per hour continually during each day. It is never a question of "Will there be enough of a breeze?" to cruise to any point on the bay; but generally the consideration is whether it would not be best to shorten sail. These considerations have caused local yachts to be rigged with fully one-third less canvas than is seen on like vessels on the Eastern waters. The *Presto* is the queen of the thirty-six-foot class, having won the title in some of the most exciting contests held on this Coast. The name board, on the *Presto's* stern, is the most familiar part of the vessel to the local yachtsmen.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, OCTOBER, 1911 No. 10

A Society of Color Photographers

Before this issue is in the hands of our readers, we will have started out a portfolio containing examples of color photography on paper, the work of the members of the Society of Color Photographers of England. It will go to color workers in this country who have sent in their names and addresses as being interested in seeing these examples and who are in a position to contribute to a like portfolio to be made up in this country. There are some fifteen names on the route list; and, as two or three months will be required to reach them all, there is still time for those interested to advise us to that effect and have the portfolio sent to them later. It contains examples of color photography in carbon, pinatype, gum-bichromate, imbibition, collotype, and modifications of them all. It is a most interesting collection and our deep indebtedness to the English society and its Secretary, Henry J. Comley, is hereby acknowledged. The formation of a like society in this country is proposed, and it is hoped that one can be made up of enough color workers to justify it in offering to co-operate with the older society, at least to the extent of periodically exchanging portfolios.

That I. P. A. Issue

This issue of our magazine was supposed to have been given over to the members of the International Photographic Association to the extent of being made up of articles and pictures contributed by them. A later issue will have to be set aside for that purpose. This is not due to a lack of material or lack of interest on the part of the members, but rather to a lack of promptness in sending in their contributions. They, like nearly all other readers, failed to realize that the text and illustrations for any given issue are gotten out many weeks in advance of publication. We are writing this just as the September issue is being mailed, while the rest of matter for this issue is all in type, the cuts made, and the cover and frontispiece already printed. The cuts are all made for the November issue and many of the articles already in type. We are, in fact, practically working on the cuts and text matter for the December issue, just as this September number is being mailed to the subscribers. To return to the I. P. A. number; a mass of material has been received within the last ten days. In one case a print has to be returned as unsuitable for block making; in another a re-written article has to be returned for the author's final approval; in a third case an article has to be returned with a request that more detail be given concerning some process; and so on through the list of usual causes of delay. This does not include the time required for redrawing of

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such diagrams as may be necessary, and the making of blocks from these drawings and the necessary photographs. The December or the January issue will perhaps be the one selected for the use of our good friends, the members of the International Photographic Association.

Our Stereoscopic Department

One of the first questions asked our Advisory Board will be as to the advisability of continuing the Stereoscopic Department we have been running. We would like to see this beautiful branch of photographic work become more popular. It must be admitted and acknowledged that there is, and no doubt always will be, a large number of workers who do not care for artistic photography. What they want is a record, a memorandum; and, in wanting such, they are well within the scope of our approval and our consideration. Such being the case, we can do them no better service than to call their attention to the beauty and truth of well-made stereoscopic slides, pointing out at the same time the simplicity of their production. But, unfortunately for them, the same satisfaction in their own aims that prevents their, to them, wasting time and material in an attempt to produce that elusive quality that makes a photograph artistic, prevents their investigating the charm that stereoscopic work holds forth to them. In order to get a brief article on stereoscopic work each month, we have had to write letters to an extent out of all proportion to the results secured. Will our stereoscopic workers kindly come forward with contributions on the subject? In setting aside the necessary space each month we have given them a chance to put their enthusiasm to a practical use in a way calculated to popularize the work they are so enthusiastic concerning. And every stereoscopic worker becomes an enthusiastic one. If you want the department retained, if you want your favorite line of photography to continue to enjoy the recognition which a stereoscopic department gives it, send in your articles for our pages. Send a few of your best prints for reproduction in connection therewith. And do it at once; the need is pressing.

Our Advisory Board

The last appeal for volunteers brought a gratifying number of responses, with the result that our "Board" now numbers nearly one hundred. New York is represented by ten, New Jersey by seven, California, Indiana, Pennsylvania, and Ohio by five each, and nearly every State in the Union represented by one or more. There is one each in Australia, South Africa, Borneo, and Germany. All kinds of photographers are represented, from the high-class professional to the amateur of a few months' experience. One advises that he is eighty-six years of age and another that he is but fifteen. One is the mayor of quite an important city, while another admits that he has been denied the advantage of even a common school education. We mention these things in order that we may express our gratification at finding our Advisory Board so varied in its personnel. It is evident that an expression of individual opinion from the members of such a board will be of the greatest value to us in our work. Our best thanks are tendered to the good friends who have so kindly offered to assist us.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

THE HYPERFOCAL DISTANCE

Three correspondents have asked concerning the hyperfocal length or distance of a lens, within the last two weeks. Of course, they all got answers by mail, but the queries show that the subject is of some interest. To find the hyperfocal distance, multiply the focal length of the lens by itself, then by one hundred, and then divide by the f number of the stop. The result is the hyperfocal distance in inches. There is a different hyperfocal distance for each stop, and this distance, divided by twelve, will, of course, give the distance in feet. That distance is the one at which the lens should be focused to secure the greatest amount of depth of field, with the particular stop used. For example, our lens is five inches focus. Five multiplied by five, and again by one hundred, gives two thousand five hundred. This, divided by eight, the stop number in the f system, gives three hundred and sixteen, ignoring the fraction, and dividing again by twelve to get the number of feet, we have twenty-six, again disregarding the fraction. This is the hyperfocal distance, in feet, of a five-inch lens, using f-8 stop. To make use of this knowledge of the hyperfocal distance is a simple matter. Suppose we want to know just what the depth of field will be for our five-inch lens, using f-8 stop, when the lens is focused sharp at twelve feet. To find the near point in focus we multiply twenty-six by twelve and divide the product by twenty-six plus twelve, getting eight. To find the furthest point, we again multiply twenty-six by twelve, and divide the product by twenty-six plus twelve, getting twenty-two. We then know that if our five-inch lens is focused sharp on an object twelve feet distant, stopped down to f-8, everything between a distance of eight feet and one of twenty-two feet will be in sharp focus. By taking a lens generally used and figuring out the hyperfocal distance for each stop, one can prepare a table that will be quite useful in making flash light pictures of groups and interiors where focusing on the ground glass with other than a full open lens is difficult. Let us suppose that one is called upon to photograph a banquet by flash. Inspection of the room shows that the nearest figure will be eight feet from the camera and the most distant one will be twenty-eight feet. A large negative is wanted, and it is estimated that a stop smaller than f-16 will require more powder than it is advisable to use. Knowing the hyperfocal distance for f-16 for the lens that it is proposed to use, one can quickly figure out whether or not that lens, using that stop, will have a depth of field from eight to twenty-eight feet. One can also find the intermediate point upon which the focus should be sharply set with the lens wide open in order to give the desired depth of field. In fact, one can, determining this point first, get the correct focus and scratch a mark on the camera run before going to the banquet hall. Arriving there, all he has to do is to rack the front out to the scratch, see that the desired view is on the ground-glass, insert the stop, and he is all ready for the exposure without the usual delay and worry of trying to secure the desired focus and depth of field after setting the camera up. By doing a little figuring before the actual business of making the exposure, one can walk into a hall, set up the camera, make the exposure, and be all through about as soon as one can make an ordinary snap on a street scene with a fixed focus camera, provided a finder is used. Using a finder, the ground-glass need not be consulted; in fact, we have seen such pictures made by the operator bringing the camera into the room with the holder inserted and the slide withdrawn, a glance at the finder and the discharge of the flash being all that was required. The legs of the tripod were not even spread apart, but used, bunched together, as a support. The average flash has a duration of about one-twentieth of a second, making it unnecessary to plant the camera absolutely

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rigid. This last point is one well worth remembering when one is compelled to work from a confined situation or where a camera, as usually set up, is in danger of stray feet coming in contact with the tripod legs.

TO CLEAR WATER

An Illinois reader writes to ask just how he should use alum to clear water. An easy method is as follows: Secure an empty alcohol or whisky barrel, remove the head, clean thoroughly, and fill with water. Dissolve powdered alum in hot water and then add sufficient to the water in the barrel to turn blue litmus paper red. Stir thoroughly and allow to settle for twelve hours. Lastly, add carbonate of soda solution to bring the water to a neutral condition; that is, enough of the alkali to neutralize the acid of the alum. Water so treated will minimize many of the troubles experienced with printing-out papers, it being used for first washing, for diluting the solutions, and for washing between the several baths until out of the hypo.

ELIMINATING HYPO

A Massachusetts correspondent wants to know if a solution of permanganate of potash has any value as a hypo eliminator. The chemical named serves only as an indicator as to the presence, or otherwise, of hypo, in prints or plates. It is used as follows: Take eighty grains of the permanganate and dissolve in four ounces of water, adding forty grains of either potassium or sodium carbonate. One or two drops of this solution will give a pale pink color to a pint of water. If, into this last is placed a plate or print that has been imperfectly washed, after the hypo bath, the hypo remaining therein will turn the pink of the solution to a yellow; or, if sufficient hypo is present, discharge the color entirely. Doing either of these, more washing of the plate or print is indicated as necessary. If the pink color is retained it indicates that the amount of hypo present is so small that it is negligible.

LOCAL REDUCTION OF WHITE DRAPERY

A New York reader wants us to recommend a reducer suitable for reducing overdense portions of portrait negatives, such as white drapery, white hat feathers, and the like, something that will have practically no effect upon the shadow detail, and something to be used locally. The following is a formula that is used by one of the most expert of our local portrait men. Take a twenty per cent solution of strong sulphuric acid and a twenty per cent solution of potassium permanganate. To use, take two drachms of the first and one drachm of the second and add eight ounces of water. Apply with a tuft of cotton. Too much permanganate or too little acid causes brown stain, but a weak solution of oxalic acid will remove it upon immersion of the plate. Another way to remove the stain is to place the plate, after washing, in the hypo bath just long enough to clear it of the yellow color. This, of course, necessitates a second good washing. The stain does not always appear, and is never very marked unless the proportions are quite wrong. The originator of this reducer, Namias, says that fixation after this reducer is advisable.

VALUE OF LENS STOPS

A reader writes to say he has a lens with the stops numbered simply 1, 2, 3, 4, and 5, and he wants to know what their f value is. He has been trying to establish their value by dividing the diameter of each stop into the focal length, but this does not seem to give him results having any ratio to each other. It might be explained that measuring the diameter of a stop and dividing it into the focal length of the lens is only a very rough way of determining its f value. The better way is as follows: Set up the camera and focus at infinity with the largest stop, remove this and insert the stop to be measured, if not the largest. Replace the ground glass screen with a piece of black card with a small hole in the center, a hole about one-eighth of an inch, or smaller, in diameter. Remove the camera to a dimly lighted room and place a candle or lamp close behind the hole in the card. Across the front of the lens put a piece of fine ground glass, and the diameter of the circle of light thereon will be the effective diameter of the stop. This, measured into the focal length of the lens, will give the working or f value. If the hood of the lens be quite long, it will be better to use a pair of dividers and measure the circle of light seen on the front glass of the lens, dispensing with the ground glass across the hood.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

THE PASSING OF OVER-EXPOSURE

To expose for the shadows and let the highlights take care of themselves is an old dictum that is very well in its place, but when the highlights are beautifully graded and constitute at least half the value of the picture the doctrine is not so good. When you want to photograph a brunette face in delicate white draperies, you have the choice of making the face soot or the dress whitewash, and it is quite easy to do both. This dilemma and all other difficulties of over-exposure are soon to pass away. This is not a dream; it is a fact. Last month Mr. Sanger Shepherd read a paper before the Royal Photographic Society of London (vide Journal of the Society) in which he explained the work of Mr. W. Hay-Caldwell, supplemented by his own experiments. From the paper it appears that by the addition of salts of hydrazin ($NH_2)_2$, or hydroxylamine (NH_2OH), to silver emulsions, these latter become insusceptible to reversal; and hence, gradations that have hitherto been impossible to record are correctly rendered. It must be remembered that the flatness of over-exposure is not due to extreme density, but to the failure of the highlights to grow in density. Mr. Sanger Shepherd showed prints from negatives of burning incandescent lamps in which the filament was correctly shown as the highest light and not reversed, as always happens; also unscreened pictures taken of the sun, in which landscape and luminary were correctly rendered. The lecturer said: "The mere fact that the hydrazin plates are able to represent correctly such an enormous range of light intensities places a new power in the hands of the photographer. But there are a great many other interesting facts about the hydrazin emulsion.

"If it is true that the halogen set free by the action of light on a silver bromide film be effectually absorbed by hydrazin, it should be possible to print out an image by the direct action of light upon the plate, and experiment proves this to be true. A hydrazin plate may be exposed in the camera and developed; or the same plate may be placed in contact with a negative and printed out in daylight. The resulting image is a rich warm brown, the color or tone of the finished transparency depending to some extent upon the strength of the fixing bath.

"I am able to show you a few lantern slides from negatives printed out in this manner in daylight, and simply fixed in a bath of three ounces of hyposulphite of soda to 20 ounces of water. The quality of the image and its color are very similar to that of the very best collodion emulsion, a rich warm brown. The fact that the hydrazin emulsion may be exposed for a very short time and developed, or the image printed right out by prolonged action of light, has a practical bearing on the manufacture of printing paper. A paper prepared with pure chloride or bromide emulsion with hydrazin may be used as an ordinary bromide paper for a short exposure in an enlarging lantern, and subsequent development; or it may be used in place of a gaslight paper by exposing for a sufficient time to give a faint visible image, and subsequently developing up to full strength; or it may be printed out by direct exposure to the light to the full depth, and merely fixed.

"I hand round a set of prints illustrating this point. The first two have been printed out from the negative in the same way that one would print printing-out paper, print No. 1 being fixed in an alkaline fixing bath, and No. 2 in an acid fixing bath: the acid fixing bath gave a slightly cooler tone in the print.

"The next four prints have been printed out like Nos. 1 and 2 and toned in a sulphocyanide gold bath previous to fixing, the time of toning being varied, and the resulting prints show a range of tones from brown to blue-black in exactly the same manner as an ordinary printing-out paper.

"In the last two prints of this series one has been given a very short exposure to light

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and developed up in the manner of the bromide paper print. The second has been given sufficient exposure to render the image just visible and the image strengthened to the desired depth by development. It will thus be seen that the one gelatino-bromide hydrazin emulsion paper may be used as a bromide paper, a gaslight paper, or as printing-out paper, without alteration in the emulsion.

"Another important application for the use of hydrazin emulsion has been found in connection with the production of positives upon celluloid. It is well known that the ordinary printing-out paper emulsion containing free silver cannot be used upon celluloid, but the hydrazin emulsion on celluloid forms an ideal printing surface; some of the portraits shown will give you an idea of the very beautiful results to be obtained upon this material."

Commenting on the above in the British Journal of Photography, the editor says: "Following the publication of the paper by Mr. Sanger Shepherd on the new hydrazin plates of Mr. Hay Caldwell, in our issue last week, we have had an opportunity of examining a large number of test exposures on the new plates made by the Paget Prize Plate Company, Watford, by whom the hydrazin materials will very shortly be placed on the market. These tests represented degrees of overexposure from twenty to three hundred and twenty times and more, and demonstrated the extraordinary capacity of the plates to yield negatives which are first rate as regards tonal correctness and convenient printing density by very slight modification in the developer (and this by varying the strength only), or even, when the degrees of over-exposure are not tremendously different, without any modification of the developer. These special features of the hydrazin plates, it will be understood, fit them pre-eminently for stand-camera photography, in which work their properties call for a revision of our ideas of "correct" exposure. The dictum to "expose for the shadows," so often a counsel of perfection, becomes advice which it is easy to carry out, and results in technically perfect negatives of subjects which would be regarded as beyond the powers of the photographic plate. We shall shortly have occasion to refer at greater length to the remarkable features of hydrazin emulsions on both glass and paper. Meanwhile, it is sufficient to say that photographers everywhere will eagerly await further announcements."

DEVELOPMENT AFTER FIXATION

The following communication from the Lumieres is another interesting contribution to the vast body of experimental work that has shed light on so many photographic problems and made their names famous:

By utilizing a complex physical developer, the composition of which was first given by Neuhauss in *Photographische Rundschau*, in 1898, the latent images can, as we know, be developed on gelatino-bromide of silver plates, after fixing in hyposulphite of soda.

This process has given satisfactory results only when greatly over-exposing the sensitive substances employed. When developing after fixing by the processes described, the time of exposure for development before fixing must, in fact, be multiplied by about twenty.

We have endeavored to remedy the inconveniences of the Neuhauss process, which involves too long a time of exposure and is complicate and delicate in application. Moreover, the images are satisfactory only when development is done slowly.

We have also considered the possibility of replacing the silver salts in the developer by other metallic salts. Experiments soon showed that the conditions of the previous fixing play an important role in the final result. By employing more and more diluted solutions of hyposulphite of soda for this fixing, we found that over-exposure became less and less necessary; the maximum percentage of the fixing-bath seemed to be about two per cent. At this strength the co-efficient of over-exposure falls from twenty to four with slow plates and six with rapid plates.

Saturated solutions of sulphite of soda, employed as fixer, gave us better results still in the case of fine-grain slow plates, but they are unsuitable for rapid plates, fixation becoming much too slow.

Amongst the numerous silver salts we employed, the double sulphite of silver and sodium seemed the best. We consequently replaced the complicated Neuhauss developer with the following formula:

A: Water .....1,000 ccs.
Sulphite of soda, anhydrous, 180 gms.
Nitrate of silver..... 75 gms.

(This formula was recently published by

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M. Chanoz, to whom we sent it apropos of the development, after fixing, of prints obtained with X-rays. M. Chanoz thus obtained good results in developing radiographic prints after fixing.)

B: Water .....1,000 ccs.
Sulphite of soda, anhydrous, 20 gms.
Paraphenylene-diamine .... 20 gms.
For a plate 13x18 centimeters take:
Solution A ..... 150 ccs.
Solution B ..... 20 ccs.

The paraphenylene-diamine in the solution B can be replaced by the same quantity of one of the following developing substances: Metol, hydroquinone, pyrogallic acid. Either of these allows of more rapid development than with paraphenylene-diamine, but the developer becomes turbid much sooner than with the latter, and deposits silver on the image.

Speed of development can be varied by increasing or decreasing the proportion of developing solution specified in the foregoing formula; the variations in time of development produce changes of color of the final image. Moreover, the more rapid development, the quicker the bath becomes turbid.

We endeavored to replace the silver salt in the developer already described by other metals, the sulphites of which are soluble in excess of sodium sulphite. Mercury alone gave interesting results, and in certain cases the mercury salt seems even preferable to the silver salt, because it gives less dichroic and more opaque images.

Moreover, by prolonged development there is less tendency to fogged images.

Finally, mercury developers remain clear much longer than silver ones, and deposit no precipitate on the images, even after long treatment. On the other hand, the solutions with the mercury base act slowly, and give images with marked contrasts, especially in case of under-exposure. Our numerous experiments led to the following formula:

A: Water .....1,000 ccs.
Sulphite of soda, anhydrous, 180 gms.
Mercury bromide ..... 9 gms.
B: Water .....1,000 ccs.
Sulphite of soda, anhydrous, 20 gms.
Metol ..... 20 gms.
For a plate 13x18 centimeters take:
Solution A ..... 150 ccs.
Solution B ..... 30 ccs.

In any case, whether the developer be compounded with silver or mercury salts, fixation of the plates before development should be done in a two per cent solution of hyposulphite of soda.

NEGATIVE OR POSITIVE AT WILL

The eminence of the contributor, Thomas Bolas, F. I. C., F. C. S., makes the following paper, with the sub-heading, "Uniformly Fogged Plates Sometimes Restorable," in the *Amateur Photographer*, deserving of reproduction. At the same time I must admit that I have entirely failed to obtain the results described, although I strictly adhered to the technique given. In place of reversal I simply obtained very dense but otherwise good negatives.

Mr. Bolas writes: Some researches recently published by Mr. Daniel Nyblin, of Helsingfors, not only cast a new light on many of those cases in which a positive has unexpectedly appeared under the action of the developer, although the photographer expected to see a negative; but, in addition, these interesting researches have a very direct bearing on everyday work. Mr. Nyblin shows how, after the exposure has been made, the photographer may settle in his mind whether he will so develop as to produce a negative, or whether he will make a positive transparency in the first instance. Another outcome of the researches now under notice is that there may be cases in which a negative fogs under the dark-room lamp, the fogging being so complete that no image is recognizable, and yet it may be possible to produce a good positive over or upon the uniform deposit of reduced silver.

We do not propose to give a literal translation of Mr. Nyblin's paper, in the *Photographischen Korrespondenz*, but a commentary with practical suggestions for the application of his researches to everyday photographic work.

If a gelatino-bromide plate is very greatly over-exposed, it will sometimes develop as a positive. There are several theories as to the nature of this action, and a few practical applications have been made of the principle, but this kind of reversal has nothing in common with Mr. Nyblin's method of obtaining a positive by the original camera exposure.

Exposure is normal, or rather tending to under than over, and care should at first be

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taken to avoid any condition tending to fog, thus the dark-room lamp should be safe, the camera should be fully light tight, and development should be by a somewhat diluted developer, so that the developed negative image shows by reflected light as clear and well picked out with the original yellowish white of the surface of the plate. At this stage the worker can consider whether he will retain the negative image, or convert it into a positive. If the latter course is decided upon, all that is necessary is to continue the development, but the cover which cautious workers place over the dish should not be used, or, in other words, the full light of the dark-room lamp should shine on the plate as it rests in the dish. Under these circumstances the plate gradually darkens, no dark-room light being absolutely without action, but if the dark-room lamp is too "safe" at this stage, it must be so modified as to act slowly on the plate. A point will be reached, perhaps in five or six minutes, when the light parts have so darkened as to obliterate the image, whether viewed from reflection on the film side, or by transmitted light; but if the back of the plate is now examined by reflected light, a faint positive image will generally be recognizable.

This is what has happened. The original negative image has protected the underlying strata of the film from the action of the dark-room lamp, but the uncovered portions have darkened by the combined action of the lamp and the developer. In other words, a positive print has been forming in the substance of the film, and when this positive print has the same vigor as the original negative image, the effect to the eye will be uniform fog, or no image whatever, excepting so far as a trace of the positive image may be recognizable when the back of the plate is viewed by reflected light.

At this stage the action of the developer is allowed to continue, and the light of the dark-room lamp is allowed to still shine on the upper surface of the plate. Under these circumstances the negative remains constant, and the positive gains in strength and vigor, until at last the positive overpowers the negative and shows boldly. It ordinarily takes from twenty minutes to half an hour to thus build up a vigorous positive image from the weak negative impression, but in some cases the light of the dark-room lamp will need to be supplemented by some other weak light, as, for example, matches held at a distance of some yards from the dish.

A plain or non-acid solution of "hypo" should be employed for fixing, as if an acid solution is used the subsequent clearing operation will be interfered with. Although the superimposition of a weak negative image, and an intense positive image will often give a result which is in fact a vigorous positive transparency, there will not be the brilliant clearness which is required for a lantern slide. In order to obtain this clearness, the positive must be subjected to that which the process worker terms "cutting"; that is to say, a more or less even film of silver deposit must be cut or shaven off, if the term be allowed. There are various chemical methods of doing this, but perhaps the best and most convenient is that of Mr. Howard Farmer, the advantage of this being that it involves no extra washing, as it is a mere incident in the fixing process.

When the fixation is nearly complete, a few crystals (say, sixty grains or so) of potassium ferricyanide are placed in a developing glass or egg cup, and the crystals are rinsed with water to remove any surface deposit, after which enough water is added to rather more than cover the crystals, the vessel being kept in gentle agitation to facilitate the dissolving of the compound. The plate being now lifted out of the "hypo" solution is placed in fresh "hypo," to which enough of the ferricyanide solution has been added to give a tint about as dark as sherry, and the plate being again immersed, the progress of the "cutting" or clearing is watched. Just as, or even before, the required reduction is effected, the plate is immersed in the washing water, and sharply moved to and fro for a few seconds, so as to rinse away the active reducing mixture. In any case the reducing action tends to continue for a little while, hence the expediency of removing the plate a little before the desired point of reduction is reached.

During the time of reduction, the dish ought to be constantly agitated, and should the solution become nearly decolorized or bluish, a fresh reducing mixture of "hypo" and ferricyanide should be used. Hypo solution which has been previously used for fixing should not be employed.

Everyone has had the experience of a plate first developing satisfactorily, and then uniformly fogging until there is no trace of im-

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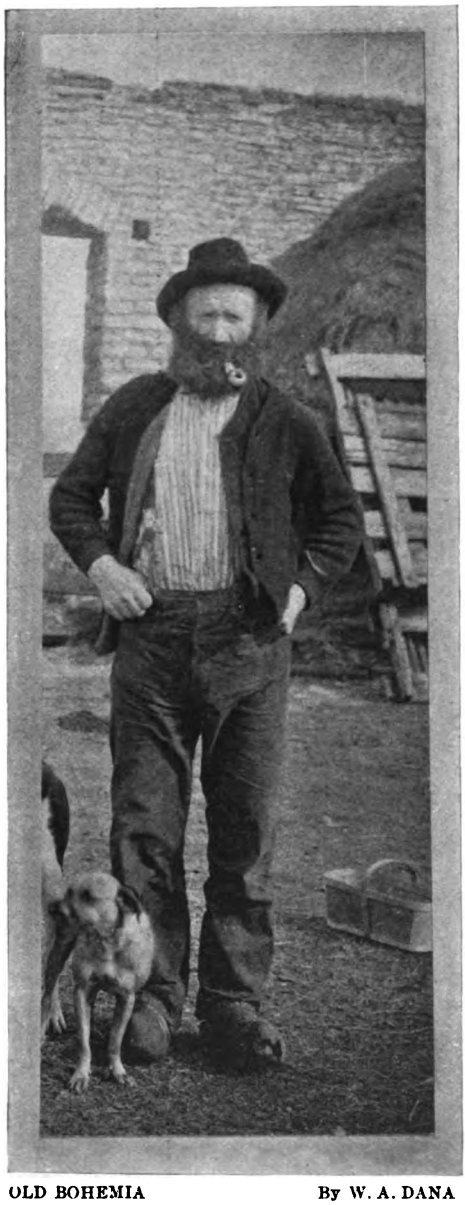

OLD BOHEMIA By W. A. DANA

age. In many such cases there is doubtless only the second stage of the Nyblin reversal, and the only need is to continue the development as described above. When an image comes out clearly and brightly, as viewed by reflected light, but extremely thin by transmitted light, and afterwards fogs by a more prolonged development, it may be reasonably assumed that the dark-room lamp is scarcely non-actinic enough, and that the fogged plate is in the transition state; further development alone being required to give a serviceable positive.

When the image that is first developed is dense or vigorous the Nyblin reversal process cannot be usefully resorted to, or, if carried out, the reduction required would be so considerable as to involve much skill on the part of the worker. In the case of a sky developing with density, and the remainder of the subject developing without much density, the sky of any resulting positive will be unduly dense, but local reduction by chemical means may be resorted to.

If the image is first fogged all hope of a satisfactory reversal is gone. The thin image, as first seen, should be clear and bright by reflected light, the clear yellow of the unreduced part of the coating sparkling through the negative picture.

That image which is first developed must be extremely thin, and the "print," or after image in the depth of the coating must be dense or vigorous. There is no impossibility, or even practical difficulty in realizing this, and the process known as "Playertype illustrates in a remarkable manner how a dense image may be developed from an extremely weak impression.

There is considerable scope for experiment in this matter, but a diluted developer of the metol-hydroquinone type may be used throughout. Metol alone, which tends to thinness of image, may be especially suitable for the first stage, and after a slight rinsing a pyro-soda developer, or hydroquinone alone may serve admirably for the second stage.

This is obvious, thus from a lantern transparency a positive enlargement can be made, but the conditions for best work naturally require study.

DEFECTIVE DEFINITION FROM THE USE OF COLOR SCREENS

If color filters be used with a lens it is clear that considerable attention should be paid to the optical accuracy of those filters, so that they do not introduce aberrations which may affect the definition of the image. Apart from the accuracy of the glass itself, distortion may be produced in color filters in the course of their manufacture in several ways.

In the first place, if the filters are prepared by coating colored gelatine upon the glass, then when this gelatine dries it will contract and bend the glass; also, when the

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A STUDY By MRS. W. W. PIERCE

filter is cemented with Canada balsam, too rapid drying or drying at uneven temperatures will distort the filter; while, finally, if pressure is exercised upon a thin filter in its cell, the filter may easily be permanently strained. If these strains were symmetrical they would be of small importance, as they would simply produce a lens of slight positive or negative power, and so, to a small extent, change the focal length of the lens with which they are used. But generally they are either in one direction only, or are much greater in one direction than in the other, and so produce a cylindrical lens, which introduces astigmatism. The effect of such aberration naturally becomes much greater as lenses of longer focal length are used, the effect varying as the square of the focal length of the lens, so that a filter which would be perfectly satisfactory on a hand camera lens of six inches focus, would be with a telephoto combination quite useless.

This point must be carefully borne in mind, in view of the recent introduction of what may be termed semi-telephoto lenses, which naturally require that a filter should be far more accurate than would be assumed to be necessary for its diameter.

The aberrations of filters can be minimized by making them of as thick glass as possible, having regard to its optical accuracy, and for filters of the very highest quality it is usual for the two glasses to be about five millimeters in thickness.—Dr. C. E. K. Mees, in *Knowledge.*

DEVELOPER MARKINGS

An Illinois reader has developed a plate exposed on a subject which he cannot again get; and, through the use of too small a quantity of solution, produced uneven development. He wants to know if there is any remedy. There is no real one. About all he can do is to repair the damage as far as possible by retouching the weaker patches up to the necessary strength, or flowing the glass side of the negative with ground glass varnish and clearing it away from over the denser portions will sometimes prove effective. It is hardly possible that our correspondent used too small an amount of developer through economy; if so, it is hardly profitable. What was most likely the case was that he had the too small amount ready and did not take the time to mix up a new supply. But in either case, he should have remembered that the difficulty and risk could have been avoided by simply adding water to the solution used. This would have brought the bulk up to a point of safety and longer development.

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OUR BOOK SHELVES

"MONEY-MAKING IN FREE AMERICA"

This is a book that every thinking person should read; and, while reading, give the words of the author thought. It is a book that will create new thoughts; and, with many, throw down a few of their previously entertained beliefs. It will, at least, convince many an intelligent reader that there is an angle at which the questions that loom large in present-day discussions may be considered; an angle at which the inconsistency of many proposed solutions are made apparent. The book is by Bolton Hall, a clear and forceful writer, both book and writer having the endorsement of Tom L. Johnson, whose introduction it contains. It is sent upon receipt of one dollar, by Brains Publishing Company, Scranton, Pennsylvania.

"COMPLETE EXPOSURE METHOD AND HOME PORTRAIT HELPS"

We are asked to announce to our readers and the photographic public in general, that this excellent book, "Complete Exposure Method and Home Portrait Helps," by Frank Morris Steadman, is now off the press. Mr. Steadman has been well received by our readers as an author and writer on photographic matters for some years past.

Home portraiture is ever an attractive phase of photography to the owner of a camera, even of the very smallest type, for who has not wished for a good "speaking likeness" of the baby, or of the old mother, or of a happy family group! And here is where Mr. Steadman's book comes in. Here is where the guiding advice of the expert in this particular line helps one to do that which he has desired to accomplish previously, but has only vaguely grasped its rudiments.

The book contains a speed list that embraces the latest emulsions from the film and plate factories, inclusive of Speed Films, Speed Packs and the recently produced extra fast plates. Added to that there are twelve portrait illustrations made by the author under conditions advised by him, which will appeal to and be a guide to the reader and the home portrait maker. Each person buying a copy direct from Mr. Steadman will be entitled to his best criticism and advice concerning one picture made according to the instructions given.

Altogether we commend this book not only for its home portrait helps, but for the speed list and its general information on matters photographic. Cloth bound, lettered in gold leaf, illustrated; price, postpaid, 75 cents. Address, F. M. Steadman, Concord, New Hampshire.

SOME HOLLAND ART STUDIES

There has just come to our desk a handsome piece of work in the form of four large reproductions of beautiful photographic scenes in Holland, printed in black and a tint of heavy buff art paper, size 13x15, with small neat calendar tables in the wide lower margin. The whole, with its front framing cover and back forming a calendar for the coming year. The reproductions are very fine, and the two that we have had framed would excite admiration in any company. Mr. Eilers advises that copies will be sent well packed and post paid upon receipt of one dollar, and we can assure our readers, particularly those interested in Holland views, that they will not be disappointed. Address: Bern. F. Eilers, Amstelveenscheweg 83, Amsterdam, Holland.

ALIKE FATAL

Thomas Moran, the veteran landscape painter, has devoted his life to the delineation of the Rockies and Sierras.

Mr. Moran, on his return from Switzerland, said to a reporter:

"The Alps are nothing compared to the Rockies. He who, after seeing the Rockies, should go to the Alps, would suffer the bitter disappointment of the sanitary engineer in Venice.

"'See Naples,' remarked the engineer, 'and die. Smell Venice—same result.'"—*Bangor Commercial.*

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Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

3026—George Premo, Jr., Box 147, Amasa, Mich.
Post cards using 5x7 and 4x5 camera, developing paper, of general subjects. Post cards only. Class 1.

3027—C. F. Small, 528½ Kenilworth Ave., Portland, Ore.
3¼x5½, developing paper, of views in general of city, park views and landscapes; for views of all kinds, photos, and any thing odd and interesting. Post cards and prints. Class 1.

3028—C. A. Andrews, Box 14, Leland, Wash.
5x7 and post cards, developing papers, of landscape views, big timber, etc.; for general views, land or seascapes. Class 1.

3029—W. H. Hosmer, Minneapolis, Kansas.
3¼x5½ and 5x7, developing paper, of landscapes; for the same. Class 1.

3030—W. S. Edwards, Paonia, Colo.
5x7, developing paper, of mountain views and fruit scenes, also art photos; for art studies, especially those containing nude figures. Post cards and prints. Class 1.

3031—Walt Giger, 808 C 11th St., Columbus. Neb.
Class 2.

3032—John Daniels, 72 Bellingham St., Woonsocket, R. I.
5x7 and smaller, developing papers, of landscapes, views, river, farms, animals, people and anything interesting; for the same. Post cards only. Class 1.

3033—W. F. Bowman, Mentone, Ind.
4x5 and 3¼x5½, developing paper, of scenery and landscapes, for the same. Post cards only. Class 1.

3034—Chas. H. McGee, Sparrow Point, Md.
Post cards, developing paper, of marine ship. Class 1.

3035—L. C. Wagner, 922 North St., Sidney, Ohio.
3¼x5½, developing and printing-out papers, of marine views, local views and landscapes; for the same, also interior work. Post cards and 4¼x6½ prints. Class 1.

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3036—R. M. Peterson, Bear Valley Dam, Redlands, Cal.
4x5, developing paper, of mountain scenery, wild game and portraits; for anything interesting. Class 1.

3037—Parker Francis, Calibran, Colo.
Class 2.

3038—George Raabe, R. F. D. No. 1, Belle Plaine, Iowa.
3¼x5½, various papers, of woodland views, small streams, and natural history views; for mountain, creek, and general views. Post cards only. Class 1.

3039—Don Harrison, Box 333, St. Louis, Mich.
Class 2.

3040—A. F. Black, 513 N. Graham St., Charlotte, N. C.
Class 2.

3041—J. Thos. McHaney, 222 N. Pruet St., Paragould, Ark.
5x7 and under, developing paper, of local scenery and portraits; for the same. Class 1.

3042—T. S. Higginbotham, Box 72, Anson, Texas.
Class 3.

3043—H. G. Heinsohn, R. F. D. No. 1, New Ulm, Texas.
5x7 and cabinet, developing paper, of scenery, for landscapes and general views. Class 1.

3044—W. H. Bradford, Box 358, Yoakum, Texas.
Class 2.

3045—G. H. Farnum, Box 125, Okemah, Okla.
5x7, developing paper, of Western cowboys, Indians, lynchings, etc. Class 1.

3046—Hugh R. Gwynn, 812 N. Calvert St., Baltimore, Md.
All sizes, developing paper, of about everything; for anything good. Class 1.

3047—William A. Lenz, Box 610, Lebanon, Mo.
All sizes up to 8x10, various papers, of views and landscapes; for post card photos of views, scenes, historic events and palaces. Post cards only. Class 1.

3048—E. B. Moody, R. R. No. 6, South Haven, Mich.
Class 2.

3049—H. Edgar Stewart, Box 346, Helena, Mont.
3¼x4¼, developing papers, of Rocky Mountain views, and travel; for scenery, travel, and portraiture. Class 1.

3050—Van Hendrix, 207 Walnut St., New Port, Ark.
All sizes, developing papers, of views and portraits; for anything of interest. Class 1.

3051—C. S. Greninger, Box 653, Renovo, Pa.
5x7 and 6½x8½, developing papers, of mountain, river, and street scenes, also miscellaneous views; for historical and artistic subjects. Class 1.

3052—H. L. Howland, R. F. D. No. 38, Wyalusing, Pa.
Class 2.

3053—J. F. Cobb, Higby, W. Va.
Class 2.

3054—J. D. Miller, Box 22, Olustee, Okla.
Up to 6x8, developing paper, of interesting views and photos; for the same. Class 1.

3055—J. Edw. Brown, 98 Maple Ave., Stamford, Conn.
Various sizes on various papers. Class 1.

3056—George Witte, Parkers Prairie, Minn.
4x5 and postals, developing and printing-out papers, of landscapes, farm scenes, and portraits; for the same. Class 1.

3057—John S. Kah, Bradentown, Fla.
8x10, developing paper, of Florida views. Class 1.

3058—H. R. Buswell, Boys' Work Director, Y. M. C. A., North Yakima, Wash.
Class 1.

3059—Jacob Williams, Lake Cicott, Ind.
5x7, developing paper, of lake views and landscapes; mountain or sea coast views preferred. Class 1.

RENEWALS.

344—J. E. Whitmore, Box 371, Scranton, Iowa.
Class 2.

1747—W. C. Cosby, 1242 North Fourth St., Abilene, Texas.
3¼x5½, developing paper, of general views; for post cards of anything interesting. Class 1.

1929—D. P. Church, Canton, N. Y.
Class 2.

1957—J. F. Goering, R. F. No. 1, Ames, Kansas.
3¼x5½ and post cards, developing paper, of views, landscapes, public buildings or anything interesting. Mostly post cards. Class 1.

2112—R. Prosser, Sizerville, Pa.
Class 3.

2120—Arthur E. St. Clair, Lordsburg, Cal.
Class 2.

2144X—W. M. Horton, Lock Box 295, Tupelo, Okla.
4¼x6½ and post cards, various papers, of railroad views; for anything of interest. Would like to exchange with telegraph operators, as that is what I am. Good work only sent and accepted. Class 1.

2215—S. S. Webb, 8005 E. Market St., Warren, Ohio.
I desire to exchange post cards, good work for good work. I want all pictures to fill the card, not cut down, as they must be 3¼x5½. Will answer all cards that are good. Class 1.

2404—A. E. Fyall, 40 Hastings St. W., Vancouver, B. C., Canada.
Class 2.

2568—Flora B. Horn, Box 24, Dallastown, Pa.
Up to 5x7, various papers, of landscapes; for post cards, all work sent and received on approval. Will not be able to exchange until November. Class 1.

2572—Cedric Kilner, 2715 Warren Ave., Chicago, Ill.
3¼x5½, developing paper, of city views, and other interesting scenes; for the same. Class 1.

2584—J. J. Ivers, 1857 Logan St., Denver, Colo.
Class 3.

2594—E. B. Eliason, Electric, Mont.
5x7, various papers, of landscapes, groups, and some speed work; for good pictures of any kind, in prints and post cards. Class 1.

CHANGES OF ADDRESS.

1750X—Felipe Floresli, 6A Dr. Lavista No. 155, Va. 13, Mexico, D. F., Mexico.
(Was Zitacuaro, Mich., Mexico.)

1806—Robt. Ritchie, Graham, Ont., Canada.
(Was Edmonton, Alta, Canada.)

1864—A. G. Lindgren, Echo, Minn.
(Was Hasty, Minn.)

1872—Frank Reeves, Stamford, Texas.
(Was Roby, Texas.) Has been away all summer, and if he owes cards to any members, he will send them upon receiving advice to that effect.

1926X—W. E. Hadsell, Apartado 167, Vera Cruz, Vera Cruz, Mexico.
(Was El Oro, Est. de Mexico, Mexico.)

2092X—Robert Greethurst, Utica, Minn.
(Was Watertown, S. D.)

2163—A. R. Cumberland, 1710 F St., Sacramento, Cal.
(Was 723 K St.)

2219—M. O. Johnson, Kenyon, Minn.
(Was Jordan, Minn.)

2263—Thomas Martin, 8 Drummond St., Suite No. 2, Grove Hall Station, Dorchester, Mass.
(Was 50 Fowler St.)

2395—C. A. Thomas, R. F. D. No. 1, Greensburg, Kansas.
(Was Lewis, Kansas.)

2690—Bartlett Johnston, General Delivery, Santa Rosa, Cal.
(Was Colibran, Colo.)

2803—W. H. Hawkins, 3504 Union Ave., Chicago, Ill.
(Was 3300 Union Ave.)

2808—O. Shauman, Stanton, Mich.
(Was Greenville, Mich.)

2844—W. F. Slusser, Ft. H. G. Wright, N. Y.
(Was Ft. Fremont, S. C.)

2939—M. H. Lorenz, care Brenan College, Gainesville, Ga.
(Was Oxford, Md.)

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

"WAYS AND MEANS IN PHOTOGRAPHY"

The above is the title of a valuable little booklet just gotten out by Burroughs Wellcome & Company, a copy of which is just to hand. It contains chapters on exposure, cap and shutter exposures, calculating exposures, development, expert opinions, modern methods, color effects by staining, direct color photography, intensifying negatives and prints, reducing negatives, slides and bromide prints, telephotography, and other subjects. They advise that copies will be sent free upon request to our readers. Address: Burroughs Wellcome & Company, 35-39 West Thirty-third Street, New York City.

A 320-PAGE CATALOGUE

We are just in receipt of the new catalogue, the twelfth, gotten out by Burke & James, Incorporated, 240-258 East Ontario Street, Chicago, Illinois. It lists a surprising variety of photographic goods, including many new articles which appear in this catalogue for the first time. It is a book that every amateur and professional should have at hand on account of the completeness of the variety of goods and supplies that are listed. A wealth of illustrations help to make the book interesting and informative. The firm advise that they will be pleased to send a copy to any of our subscribers or readers upon application. Simply write for their new catalogue and say you are a reader of CAMERA CRAFT; you will be pleased with the book you will receive.

A STRONG COMBINATION

A very handsome little booklet has recently reached our desk and been read with great interest. It sets forth quite clearly the advantages of a good camera and a good lens when a wide range of work is to be undertaken. The action of the Graflex principle of construction and the focal plane shutter are clearly explained, with illustrations to assist. A table is appended giving the sizes of lenses best suited to all these cameras, focal capacity, sizes, dimensions, and prices for complete equipments and extras. The booklet is entitled: "The Graflex-Steinheil Combination," and will be sent free upon request to Herbert & Huesgen Company, 311 Madison Avenue, New York.

THE TEXAS CONVENTION

With the election of officers and the awarding of prizes in the competitive exhibition, the Professional Photographers' Association of Texas came to an end on Thursday afternoon, August 24th. No selection was made of the next meeting place, that piece of unfinished business being left to the new executive committee. Members of this committee stated that either Galveston or Dallas would be selected.

Officers were elected as follows: G. K. Miller of San Marcos, President; H. J. Braunig, Hallettsville, Vice-President; A. M. Howse, Latonia, Secretary, and A. L. Blanchard, Hillsboro, Treasurer.

Prizes were awarded as follows: Class A, T. S. Higginbotham, Anson, First; G. W. Miller, Midland, Second. Class B, C. R. Sauer, New Braunfels, First. Class A Reading, Joseph Lux, Sealy, First; F. M. Boyd, Nameville, Second. Association Cup, won by O. Haggemann, San Antonio; Cyko Cup, won by O. Haggemann, San Antonio. Grand Trophy, won by L. T. Powell, San Antonio

The convention was a success in every sense of the word. The President and Secretary were re-elected for another year and the two new officers are known to be enthusiastic and energetic workers.

BURTON'S STORIETTES

William Burton, whose photographic skill is a source of daily pleasure to the readers of the Times, is to appear at the Aubert Airdome Sunday, Monday and Tuesday nights with a selection of his best pictures to be thrown on the screen.

Accompanying each picture, all of which are out of the ordinary and are handsomely colored, Mr. Burton will give a brief but graphic description of just how it happened to be taken. Under the title of "Burton's

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Illustrated Storiettes," forty pictures will be shown and forty stories told in fifteen minutes.

He reports much success recently with his storiettes. In addition to his regular views, the photographer shows his audiences the principal local events of the day. At the Aubert, Saturday night, as a special feature, he will throw on the screen a number of graphic action pictures of the swimming race in the Mississippi Saturday, including the start, finish and the winners.—*St. Louis Times.*

DEATH OF VICTOR E. GEORG

Victor Emanuel Georg, one of the best known photographers in Illinois, died at the Nordrach Ranch, Colorado Springs, Colorado, August 14th. He had been there about a month, going for his health, his death being caused by broncherea. His remarkable success at Springfield, Illinois, as an artist at home portraiture by photography has been known and recognized for many years. He was a charter member of the National Association, and the organizer of the Illinois Association. He was a director of the American Free Art League, and had attended several art academies, serving his photographic apprenticeship with W. H. Sherman, one of the greatest photographic chemists of that time. Later, his studio in Chicago enjoyed the patronage of German and American exclusive society circles. In 1897 Mr. Georg removed to Springfield, where his at home portraiture at once earned for him a wide and ever-growing reputation. His death is mourned by a large circle of friends throughout the country.

PRESIDENT BISSELL ON THE COAST

Lewis H. Bissell, president of the Illinois College of Photography and the Bissell College of Photo-Engraving, paid California a visit during August, coming here from the national convention. With him was his charming wife, they being, while here, the guests of their daughter, Mrs. J. F. Magee. Although neither looks the part of grandparent, there is a remarkable youngster at the Magee home that can impose any obligation, including more frequent visits to the Coast than heretofore. Mr. and Mrs. Bissell enjoyed themselves thoroughly while here, and will try to be with their daughter, and that interesting grandchild, more frequently in the future.

"CARRY YOUR LIGHT WHERE YOU CARRY YOUR LENS"

The above is a most apt quotation from the advertisement of the Towles-Schofield Smokeless Automatic Flashlight Machine advertised in this issue. We have before us as we write some of the finest examples of portrait work that it has ever been our pleasure to see, examples of work done with the machine. We would like to reproduce them but space hardly permits. The strong point of this new machine is the fact that it consumes the smoke, doing away with all dangerous and unsightly smoke bags, and removing all danger. It works automatically, and does work equal to the best skylight, as any expert will agree after seeing the pictures which we have. The firm has a fully illustrated booklet describing this wonderfully simple and efficient flashlight machine, showing some fine work done with it, which they will gladly send to those mentioning CAMERA CRAFT. Address, Towles-Schofield Company, Evans Building, Washington, D. C.

REPORTED BY WILLIAM WOLFF

Bert Hodson, the popular photographer of Sacramento, has rented a part of the front of his ground-floor studio to a railroad company and has made extensive alterations in the rear portion.

Grace Hubley, of the same city, reopened her handsome studio September 1st, after having spent two months' summer vacation with her people at Auburn.

William Schultz, a former demonstrator for the Eastman Kodak Company, now has a well-appointed studio at Sacramento.

W. S. Valentine of Redding has had his studio thoroughly renovated and redecorated throughout.

C. C. Green of Marysville is doing a rushing business. He and his force are working nights in an effort to keep up with the orders.

The Miller Photo Company of Klamath Falls, Ore., have a very fine plant and equipment. They are fitted out to do all kinds of work from the smallest to monster panoramas.

The Cottage Studio of the same place is now owned by E. G. Argraves. Mr. Bond retiring from the firm.

Mrs. F. W. Lestmuster of Central Point, Ore., has a very busy summer and expects a good fall trade.

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Ashland, Ore., has two photographers, both of them owning good automobiles. Must be a good town for photographic work.

INGENTO TABLETS ARE POPULAR

The new Ingento Tablets have apparently jumped into immediate popularity; judging by the demands made upon the dealers during the short time they have been advertised. Their obvious convenience, the economy of their use, the elimination of risk through chemicals that have deteriorated or lost their strength, all combine to make them appeal very strongly to the users of photographic solutions. There are seven varieties from which one can choose his favorite developer, so there can be no complaint on that score. They are put up by Burke & James, Incorporated, 240 to 258 East Ontario street, Chicago, Ill. If your dealer has not secured a supply, 35 cents will bring you a carton of forty-eight, direct. Mention the kind of developer required.

PHOTO-ENGRAVERS TAKE NOTICE

We have just received a handsome, forty-eight page booklet, one replete with illustrations, forming a most helpfully suggestive manual for the user of routing cutters. Much valuable information is given—pages of it, and illustrations show example of free-hand brass and in boxwood, routing in zinc, copper, and end-grain mahogany. It is the most complete exposition of "cutters that cut" ever put into print. The firm writes us that the supply is large enough to go around, and that they want to send a copy, with their compliments to every user of a routing machine who is interested enough to send for one. Address, John Royle & Sons, Paterson, New Jersey.

CLEANING DIRTY PLATINUM PRINTS

A Chicago correspondent says that he has a collection of very fine platinum prints that are quite badly soiled, although there seems to be nothing more than ordinary dust involved; that is, no staining or discoloration. He wants to clean them. The right way to go about it is to take a pint of water, dissolve therein about a teaspoonful of powdered alum, and then add enough flour to make a mixture of about the consistency of paste that is not too thick. This should be applied to the print in a thin coating, worked about with a soft brush or the tips of the fingers for a few seconds, and then washed off with gently running water. If very dirty, a second or third application may be necessary.

BISSELL COLLEGE OF PHOTO-ENGRAVING

Geo. Benedict, president of the Globe Engraving Company, of Chicago, has donated a new patent etching machine to the etching department at Engraving Hall.

Professor John Gums, of the finishing department, is the proud parent of a nine-pound son. Professor Gums says he has all the ear marks of a crack photo-engraver.

THE MULTI-SPEED BOOKLET

There is a handsome and instructive booklet covering the work, and it is a wide range of work, done with the Multi-Speed Shutter, that every one of our readers should send for. Perhaps the most remarkable of the numerous illustrations is one showing Barney Oldfield breaking the track record with a mile in 35 seconds. Even the lower spokes of the wheels are shown, despite the fact that the machine is passing directly across the field of the lens. The negative was made with a 3A Kodak, using the regular Kodak film. A section, a most interesting one, is devoted to high speed flashlight work, a field practically unworked until the advent of the Multi-Speed shutter with its flashlight attachment. Write for a copy before the matter is forgotten. Address, The Multi-Speed Shutter Company, 317-319 East Thirty-fourth street, New York.

REX CAMERA CLUB

This is a new camera club recently organized in Milwaukee, Wisconsin. The officers are as follows: President and Secretary, Henry L. Van Langen; Vice-President, Elmer Reitzel, and Treasurer, Elmer Anderson. Manufacturers and dealers are requested to send catalogues, addressing them: Henry L. Van Langen, President Rex Camera Club, 928 Twentieth Avenue, Milwaukee.

SOFT BROMIDE PRINTS

A New York reader wants to know how he can get other than soot-and-whitewash bromide prints from a certain negative that is inclined to print too hard. Dissolve one drachm of potassium bichromate in ten drachms of water. Add one drachm of this solution to ten drachms of water, and therein immerse the exposed print for one minute. Then wash for another minute and apply a normal developer. The exposure should be about three or four times normal.

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VOL. XVIII No. 11 NOVEMBER, 1911 Pri

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If the negative is weak use:
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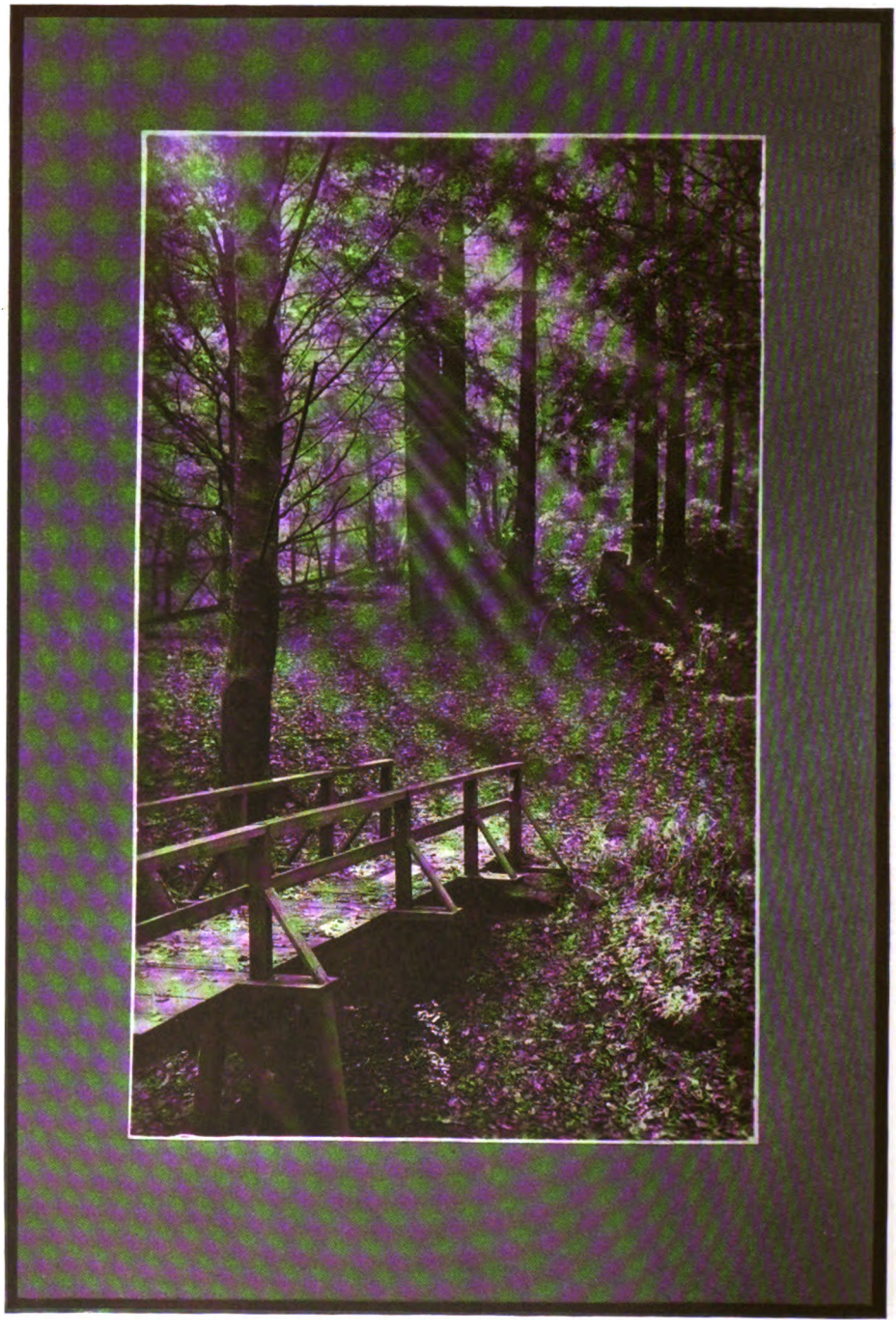

STREAMERS OF SUNLIGHT
By W. BUSH

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII NOVEMBER, 1911 No. 11

The Effect of Streaming Sunlight

By W. Bush

✷

With Illustrations by the Author

From time to time, some reader writes to ask how he should proceed to secure an effect of sunlight shining through fog or mist, such as is shown in the pictures reproduced in connection with the article below. Several have been asked to meet this demand with an article describing the method of procedure, but the request was, until we approached Mr. Bush, met with either an assumption of great skill and knowledge that could not be divulged, or with the simple statement that one had only to find the right conditions and photograph them. While we trust that, in explaining how he secured his results, Mr. Bush will neither offend our over-skillful readers nor weary those who find it so easy, we feel sure that a large number will appreciate his thoroughness. He has advised that he will be pleased to give any further information that may be desired by a reader, if addressed in care of this magazine.—THE EDITOR.

In comparing notes with some of my amateur friends, I have often been amused at the ideas entertained by them in regard to securing a subject for a picture. They seem to think that luck and chance are the principal factors. My belief is that the worker who starts out with his hopes of success based on a possible lucky accident, will meet with a great many disappointments. I will attempt, in this article, to show that there are times when no small amount of perseverance is required before one achieves success; but, when the object is finally gained, the worker is well repaid in the thought that his time was well spent.

One bright morning in the early part of the year, I started out for a walk through the University grounds at Berkeley. The sun was shining very brightly overhead, but I noticed that a fog, one lying quite low along the ground, was

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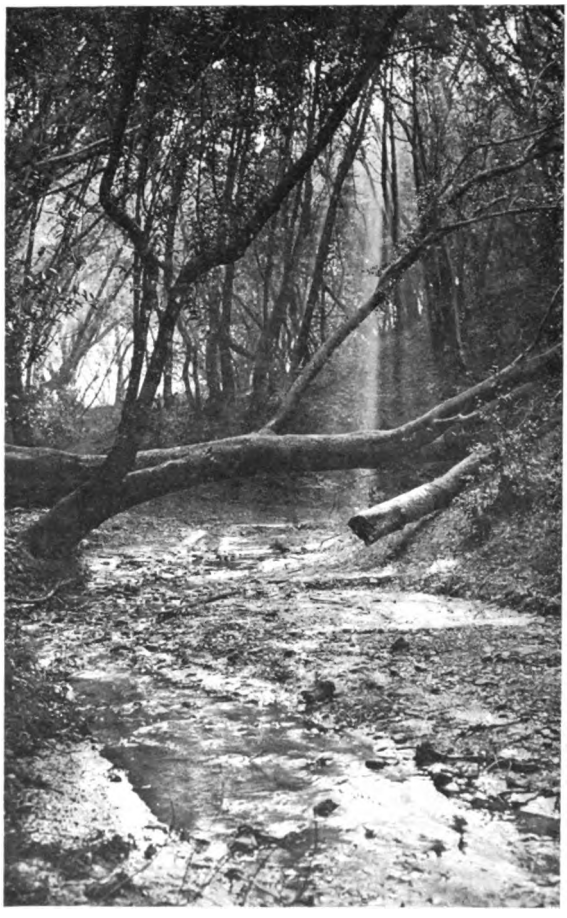
drifting inland from the bay. As I entered the pine woods near the Greek Theater, this fog came sweeping through the trees, for a few moments seeming to entirely shut off the sunlight. A few steps further and I entered an open space where the sunlight was breaking through the tree tops and throwing beautiful streamers of light directly across the path.

The effect was one of the most pleasing I had ever seen, and for a few moments I stood in full enjoyment of the picture presented by one of nature's most charming phases; then I wished that I had my camera, in order that I might secure a negative of these shafts of light as they penetrated the fog, in a measure perpetuating the charm of the scene which had impressed my mind so deeply with its beauty. I at once determined that I would avail myself of the first opportunity to again visit the spot, taking my camera, and if possible secure a picture. Time and again, day after day, I tramped through the region, hoping that nature would again appear in the same charming mood for my special benefit, but neither luck nor chance seemed to be in my favor.



SUNSHINE AND SHADE

On a certain occasion, when a boy at school, I was given as a writing lesson the motto, "Perseverance brings success," and I determined to apply that well-remembered injunction to the object in view. On numerous seemingly auspicious occasions I visited that locality, set up my camera, and patiently—or impatiently—waited for the fog that failed to appear. I made several exposures when some slight indication of fog was present, but failed to get the desired effect. Eventually, after disappointing me many times, the fog again came along, the glorious sunlight broke through the tree tops, the opportune moment arrived. Snap went my shutter, and I shouldered the camera, fully assured that I had secured my picture. "Sunshine and Shade" is the result. Quoting from my exposure record, the following is the data concerning the negative: Month, February; Time, 9:50 a. m.; Light, misty, bright; Plate, Cramer Iso backed; Stop, f-11.3; Exposure, three seconds.

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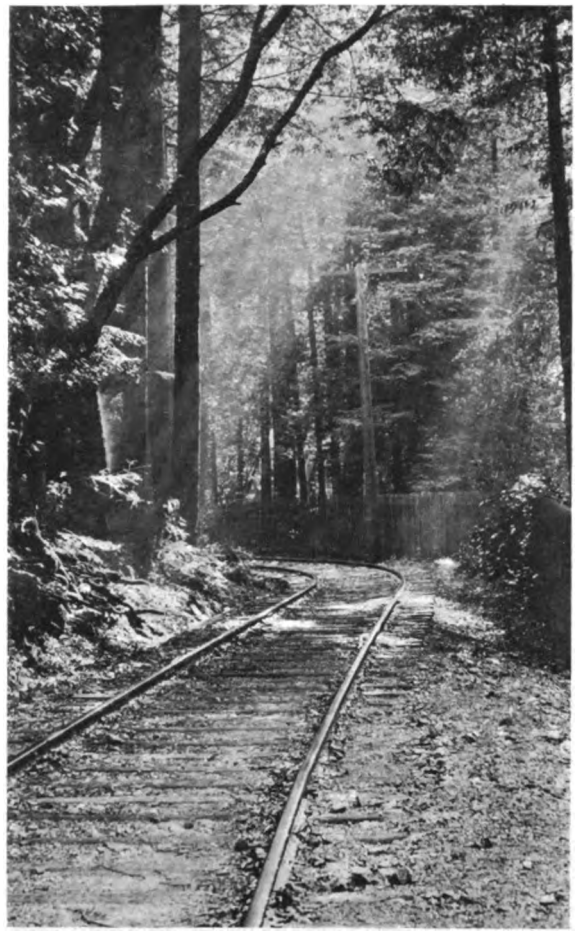
THE EFFECT OF STREAMING SUNLIGHT

The picture, "Light on the Track," is the result of another persistent effort to secure a like effect, but with entirely different surroundings. In searching for a setting for this, my second picture, I learned that care should be taken to find the best possible viewpoint. With this particular class of subjects, it is surprising what a difference is sometimes made by moving the camera a foot or two to the right or left. I also learned that it was best to have some fairly dense foliage as a background, as by so arranging the setting, the streamers of light are thrown out more distinctly. If there be too much light behind them, they will have little or no value and there will be such an inclination to halation that not even a backed plate can prevent its making its appearance.



LIGHT ON THE TRACK

Owing to the many disappointments met with, I gave the subject quite a little serious study, finally deciding that the best results could be secured with the following arrangement: Bright sun, low-lying fog, fairly dense foliage to form a background, and the lens pointing in the direction of, but not directly into, the sun. I further decided that the lens, when working towards the sun in this way, would have to be protected from direct sunlight by having the shadow of a branch or tree trunk fall across it. If this is not practicable or consistent with the selection of the best viewpoint, a lens shade should be used. On one occasion, I took a card from my pocket, bent it into a tube about an inch in length, and fastened it over the front of my lens with a rubber band. In this particular instance the expediency answered admirably, but a good lens shade is desirable. When one depends upon the shade from a nearby tree trunk or branch, the wait for a favorable moment for the exposure may necessitate moving the camera several times, as the sun is moving all the time, and the protecting shadow also.

And I found that I was right in all these details when I came to put them into practice. The second picture, "Light on the Track," proves that when

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the fog came dense the shafts of light appeared stronger and more clearly defined. The data concerning this negative is as follows: Month, February; Time, 12 m.; Light, bright with some mist; Plate, Cramer Iso backed; Stop, r-16; Exposure, fifteen seconds. Only the back component of the lens was used, giving a focal length of fourteen inches on the 5x7 plate. Observe how the foreground is kept narrow, giving a more natural appearance to the railroad track than would have been the case had I used a shorter focus. The length of the exposure should also be noted. Either of these two negatives can easily be printed so as to show beautiful detail in the trunks and branches of the trees; but in making these herewith, my object was to produce as far as possible, an effect of dark shadows and the gloom of the forest in contrast with the bright streamers of penetrating sunlight.

The last picture, the one used as a frontispiece, "Streamers of Sunlight," brings out another point I would like to make as plain as possible, a point also illustrated in "Sunshine and Shade." The light, as it sparkles along the hand-rail of the bridge, in the first, or as it sparkles along the trunk of the tree and on the stump, in the last, is much more effective than when it simply strikes the ground and gives a spotty effect, an effect quite common in sunlight pictures devoid of the streamers I have tried to secure. Striking some object in this way, the effect of light is better and adds much to the attractiveness and charm of such pictures. And besides, so treated, the resultant print refutes the idea that the effect is the result of light penetrating the holder when the slide was withdrawn or replaced. Were this last the case, there would be no indication of the light being stopped by an object in its path. The data for this last negative is as follows: Month, January; Time, 11:15 a. m.; Light, bright, but atmosphere misty; Plate, Cramer Iso backed; Stop, f-11; Exposure, twelve seconds. The long exposure was made necessary by the deep shade of the pine trees, the branches being quite thick and dense overhead. The critic will no doubt suggest that I should have shown the nearer end of the bridge, but had I done so I would have entirely lost the light streamers. Had I taken it from a point more to the right, the streamers would have appeared stronger, but I would have lost the prominent tree trunk at the left and the pretty light along the hand-rail of the bridge. As it was, I moved my camera three or four times before deciding upon the selected arrangement and making the exposure.

The best results are undoubtedly secured with a backed or non-halation plate. Generous exposure should be given. In developing, I dilute my developer with three, or even four, times the amount of water called for by the formula. I find it best to develop by factor, keeping the tray covered as much as possible. As soon as the first trace of the image appears, I cover the tray for the determined period, then remove plate, rinse, and place in the fixing bath; frequently doing all this without any further examination of the negative until fixed and clear. Carrying development too far clogs up the light streamers that are so important in the picture. I am a believer in the advisability of reducing a negative that has acquired too much density, but in work such as this the ferricyanide reducer is very apt to clear out the image of the light streamers by the time the over-density in other parts has been sufficiently

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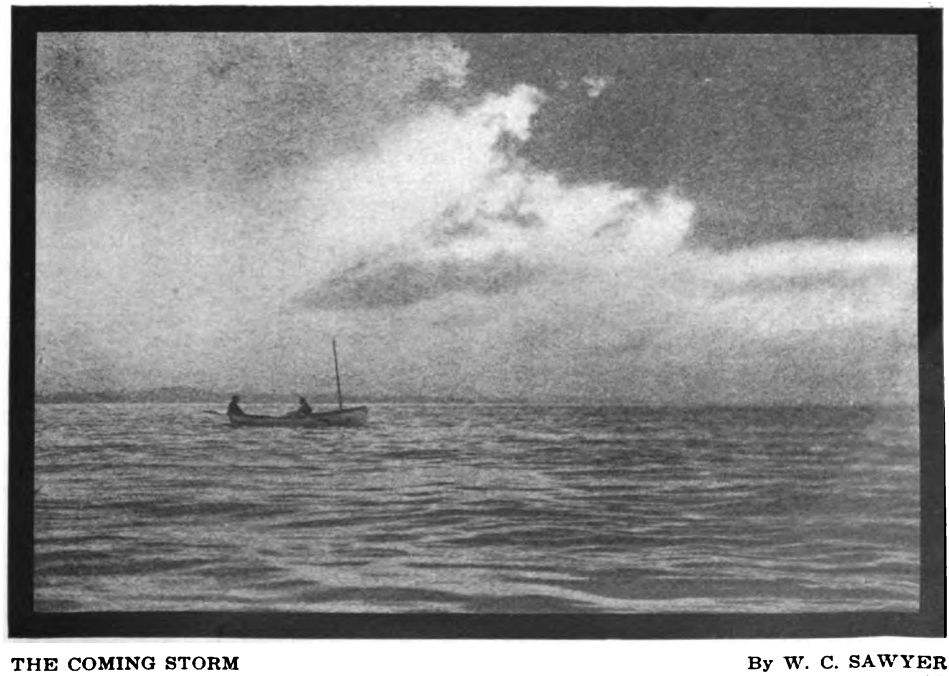
reduced. One should get accustomed to his developer, using a low factor number if a thin negative is desired and a higher number when more density is wanted. If one will do this, giving the matter of factorial development the attention it deserves, he will save many a plate that would otherwise be thrown away as worthless.

No doubt many of the professionals who read this magazine will feel disposed to smile at my presentation of the matter, but I am only writing this for the benefit of those who do not know the "how" of making such pictures. What I have written is not theory, but practical experience. And my object in setting it down as plainly as I have is to make it so clear that the less expert or less advanced worker may attempt like results with a little more confidence than he would otherwise have, and that he may, in doing so, at least accomplish something that will stimulate him to further efforts.

As when a painter, poring on a face,
Divinely through all hindrance finds the man
Behind it, and so paints him that his face,
The shape and color of a mind and life,
Lives for his children, ever at its best
And fullest.

TENNYSON.



THE COMING STORM — By W. C. SAWYER

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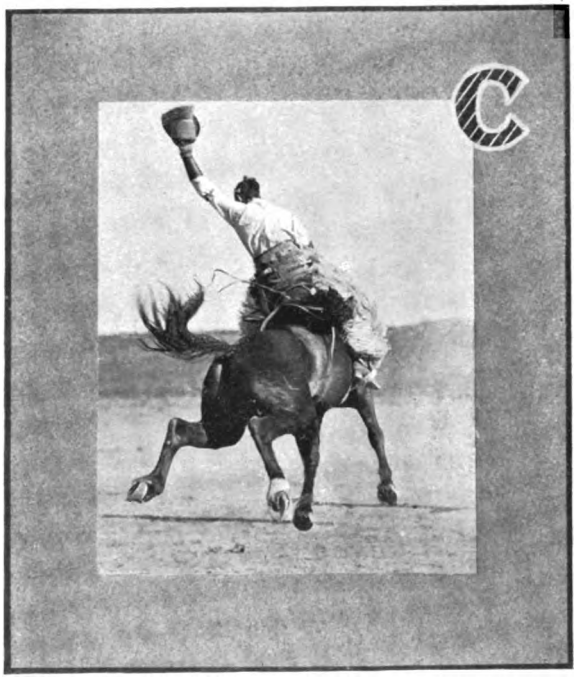
The Cost of Producing Photographs

By M. F. Jukes

A Paper Read Before The Last Inter-Mountain Convention

With Illustrations by the Author



SCOVILLE ON ARAPAHOE
Copyrighted 1911, by M. F. Jukes

COMPETITION is today so keen that in many lines of business it has practically ceased to exist, through the forming of combinations; economic conditions having compelled men engaged in like business to get together for mutual benefit. In almost every line where competitive conditions still exist, we find a spirit of co-operation more or less strongly entrenched. This Convention is in session because we, as individuals, wish to better our material or financial condition; in other words, we are here to learn from each other, if possible, new ways and means of getting hold of the ever-elusive dollar. And in what I have to say I shall seek to benefit the photographer in the average Western town.

I have selected this subject, "The Cost of Producing Photographs," for the reason that little or no attention is paid to it by the average photographer, and also because of the important part it plays in the fixing of prices. I would be willing to wager that not more than one out of twenty-five photographers can say that he knows to a certainty that his pictures of a given size cost him a certain definite price, or anywhere near it. He can guess at it. So can anybody. What is the result? Where there is one man doing good work and getting what some of us consider a high price, there are a dozen little fellows fighting each other on the price basis, each probably explaining to his customers that the big man is a robber; a nice state of affairs and one quite conducive to the betterment and uplifting of the business in general. You have all seen show cases full of cabinet photographs, priced at a dollar a dozen, or there-

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abouts. A photographer in one of our Western cities had, in 1906, on display in his show case, genuine platinum prints, 3x4 inches in size, mounted on a neat, flexible card, at the ridiculous price of seventy-five cents a dozen.

Let me cite another example of this frantic effort to get business, business at any cost. Some years ago, one of the photographers in another Western city thought it would boost business a little to put out a ticket. We are all acquainted with the ticket racket. In this particular case, it worked out as follows: One of the other photographers took up tickets in self-defense; and, before it was over, about six were in the game and prices were literally "shot to pieces." The town was flooded with coupons, and finally one man put out a

A FEW SAMPLES OF MR. JUKES' WORK

ticket by which he guaranteed to make good any offer made by the coupon of any other photographer. His agents went through that territory like a fine-tooth comb, and after the smoke had cleared away, two picture men were flat broke, while the pickings that the rest could find were pretty slim, for months. The two high-priced men in the town paid no attention to the trouble and went right on putting money in the bank.

The average photographer falls into traps like these, most of them of his own making, because of one of two things, ignorance or thoughtlessness. Do you suppose for a minute a man would be anxious to get business if he knew that every dozen pictures he made at a certain price would take twenty-five or fifty cents out of his pocket? I should say not. Yet that is exactly what many photographers are doing today. What little business they do get at a profitable figure, goes to help pay the losses on other work at prices which, in some cases, are actually below cost. What is the result? There are a lot of men in the profession, call it a profession if you like, to whom the stock houses will not grant five dollars' credit. I know, because I have been there myself.

We used to figure out the price of our competition photographs on the following basis: The price of a couple of plates, a dozen sheets of paper, and a

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dozen card mounts, adding enough to cover retouching. This would approximate between fifty and seventy-five cents, according to the class of material used, and then we would fondly imagine that everything over and above that figure was velvet. After a more or less busy season at what we thought was a good enough price, we began to wonder what the trouble was, and felt like throwing up the picture business and going into something else. There was no money in the business, anyway.

Today you will find, in any successful and well-organized business, a well-developed and sometimes intricate system of getting at the cost of the article produced or marketed. This becomes absolutely necessary when anything is sold on a narrow margin, and even if not sold under those conditions, it is a valuable asset in effecting economies and increasing profits. It is a safeguard in case price-cutting becomes necessary, as it sometimes, but rarely, does. Occasionally we have to fight fire with fire, but it is a good thing to know where to stop.

Ascertaining costs in a small business like that of the average photographic studio should be a very simple matter; and even in a large business it is not a difficult problem. About six years ago, the old *Photo Beacon* had an article on the subject, quoting figures from various sources, and the conclusion arrived at was that, while the average man figured, or rather guessed, that the gross cost of his cabinet photographs amounted to a little over one dollar a dozen, the real cost was away above this. A Chicago photographer who had a splendidly arranged studio and well-organized force, and who did a business of one hundred thousand dollars, for cabinets alone, in one year, made the statement that his photographs cost him, per dozen, two dollars and fifteen cents. We now begin to see why the average photographer is not making any money with prices at three dollars a dozen. The chances are, ten to one, that his pictures are actually costing him more than this figure. The following will explain.

In figuring cost, the photographer has, in the main, two items to deal with: actual cost of material consumed and, excepting where retouching is done piecework, his overhead or running expense. This latter goes on whether business is done or not, and it may surprise you to learn that, in the average studio, it is almost invariably higher than the first item, the cost of material. It includes the following: Rent, heat, light, water, insurance, taxes, postage, repairs, advertising, waste, depreciation, samples, re-sittings, etc. Then there are the bad debts, wages paid help; and did you ever figure your own time as being worth anything at all? Taking the prices obtained by the majority of photographers, we are forced to believe that many of you do not.

Looking at the following figures, we will get still closer to the subject. These comprise the cost of the material consumed in the production of one dozen ordinary cabinet photographs. Just take your pencil and put down these figures, for the sake of comparisons that will follow, and to give you something to go by in case you wish to investigate your own costs. Four plates, thirty cents; paper for twelve prints and proofs, twenty-five cents; envelopes and tissue enclosures, seven cents; retouching one negative, thirty-five cents; chemicals, ten cents; and mounts, thirty cents. Total, one dollar and thirty

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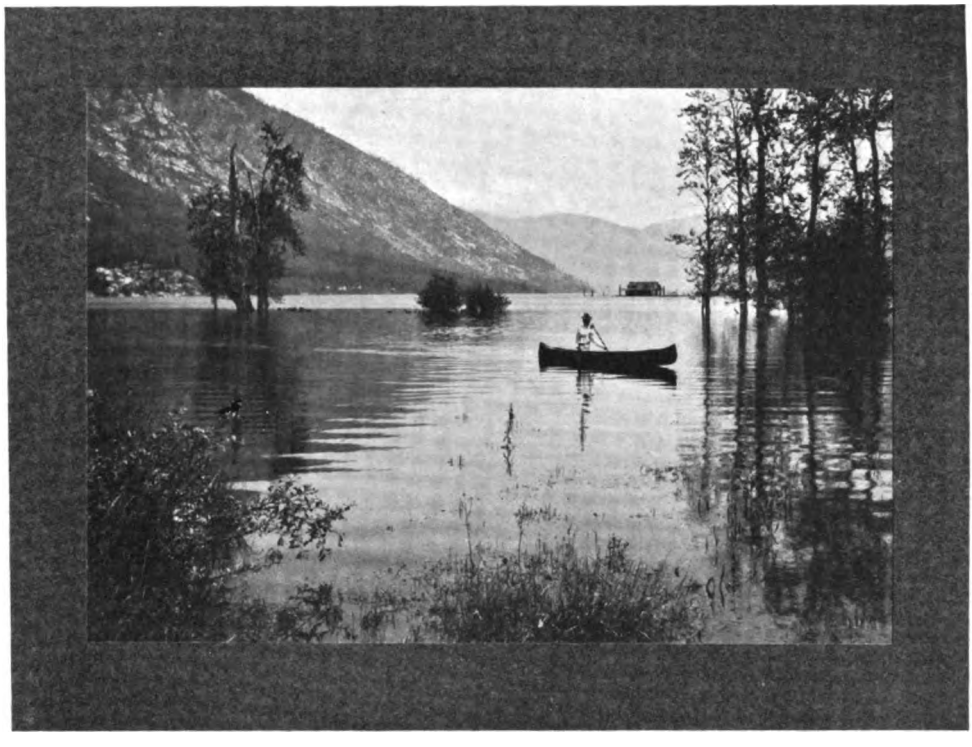

MELTED SNOWS MAKE SWOLLEN RIVERS

cents. These items may be cut down slightly, or added to, as the case may be. You will find that they are somewhere near the average. In any case, these slight changes will affect the total but very little, as we shall see later on.

We now come to overhead expense. This is for a studio where the business is such as to warrant the employment of one assistant, and, for one year, will be approximately the following: Rent, at twenty-five dollars a month, three hundred dollars; fuel, at eight dollars a month, call it fifty dollars for seven months; electric light, at a minimum of a dollar and a half a month, twenty dollars; water, at two dollars, make it twenty-five dollars; insurance, which every photographer should carry, fifteen dollars; taxes, ten dollars; postage and samples will probably amount to thirty dollars; depreciation, waste, and advertising will come to not less than two hundred dollars, and a fairly good assistant, in these days, will cost at least fifteen dollars a week. We will call it seven hundred and fifty dollars for the year, which is none too high. Now, if you value yourself as being worth anything at all to your business, you should charge up your own services, even if it is only at a nominal figure. We will put it, in this case, at seventy-five dollars a month, or nine hundred dollars for the year.

This brings the total overhead, or running expense, to twenty-three hundred dollars per year. I see that I have overlooked interest on investment, but we will let that go. This is the only businesslike way of getting at one's cost; and, if you will do a little more pencil work, you will find that, with a material cost

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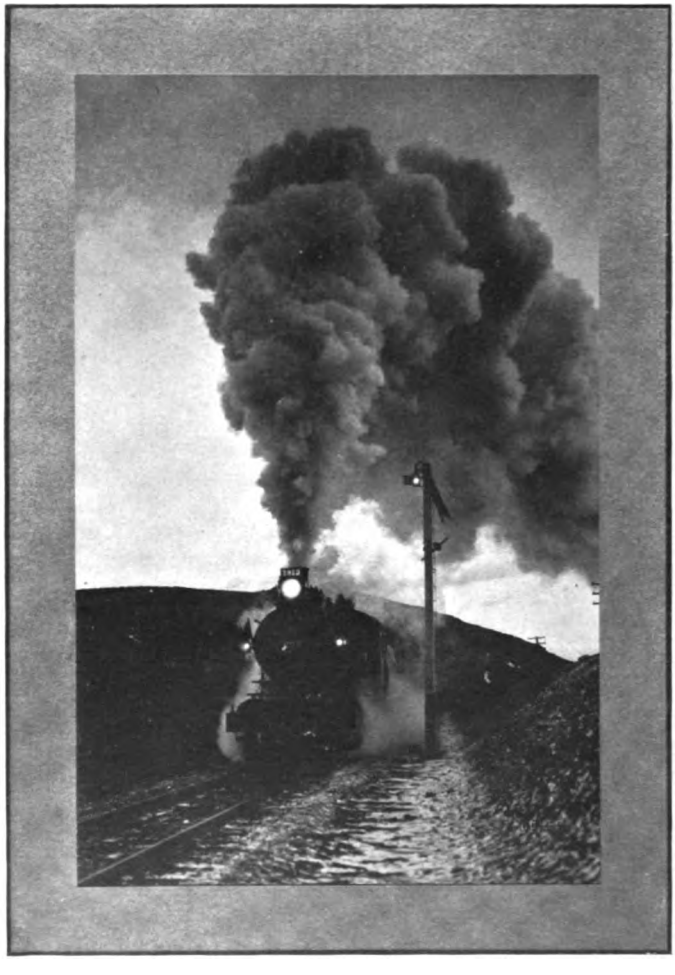
of a dollar and thirty cents a dozen, and an overhead expense of twenty-three hundred a year, in order to make ends meet you will have to do a business of ten hundred and fifty sittings at three dollars and a half, or three thousand six hundred and seventy-five dollars. In other words, with this volume of business, your pictures have cost you three dollars and a half a dozen. To be exact, the above business will show a profit of ten dollars for the year, or less than a dollar a month.



AS NIGHT COMES ON

We all know the man who says to himself: "If I bring my price down to a little below that of my competitor across the street, I can get enough extra business to squeeze him and make a few dollars myself." Let us see. We will assume that he cuts his price fifty cents, thereby making it three dollars. We will also assume that he gets more business, three hundred sittings more than under former conditions. Now, the business, with the same overhead expense and at the same cost for material, will have to total thirteen hundred and fifty sittings at three dollars, or four thousand and fifty-five dollars for the year. This shows that, after having done almost a third more work, he has had to assume a loss of five dollars.

It is doubtful if a reduction of fifty cents a dozen would, in actual practice, bring such an additional volume of business as is shown in the above case. The probabilities being very strongly against it, we will see what effect reducing the price to two dollars and a half will have. Here we get a surprise. Assuming that the one dollar reduction did increase the business to practically double, making it reach nineteen hundred and fifty sittings, what has our price-cutting friend to show for it? His total expense for material has jumped to

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WINTER IN THE ROCKIES

twenty-five hundred and thirty-five dollars, making the cost of running the business forty-eight hundred and thirty-five; but, at two and a half per dozen, the amount received for the year is only forty-seven hundred and fifty dollars, so that he had to pocket a loss of eighty-five dollars. Is it worth while?

Look at these figures as we may, there is only one conclusion that can be arrived at, and that: when we are monkeying with price-cutting with prices anywhere around three dollars for cabinets, we are fooling with a buzz saw.

A picture with a low price may be used as an inducement to get people into the studio, but every effort possible should be made to switch the customer to higher-priced work. Department stores use bait of this kind, as an advertisement; but when one goes to buy the goods, he finds he has to run a gauntlet of wonderful and attractive displays in other lines, displays that almost compel purchases. The advertised bargain is in some remote corner of the huge establishment, and the reason it was placed there is obvious. Unless we can handle our customers in this way, a cheap picture for a leader is a dangerous thing for the pocketbook, and it should only be used when the proprietor is a shrewd salesman or has a most competent receptionist in his service.

Have you had enough figures? We will look on the brighter side for a few minutes and make some comparisons, using higher prices. Taking the same expenses, and raising our price to four dollars, we find the figures show a profit of five hundred and thirty-five dollars for the ten hundred and fifty sittings. Raising them still another dollar, we show the still larger margin of fifteen hundred and eighty-five dollars. We are now mounting into the realm of profits, yet five dollars is not a big price. If you really want to soar, try eight dollars, many men are getting it for cabinets and 4x6 prints; and, to make up for the additional cost of higher grade material, we will add seven

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hundred and thirty-five dollars, which should surely cover it, bearing in mind that we are still making the same ten hundred and fifty sittings, and our profit for the year reaches the astonishing sum of four thousand dollars.

Is it worth while going after business on the price-cutting basis? Why not be a little more sensible and boost prices a trifle all along the line? What incentive is there for a man to produce good work when there is absolutely nothing in it for him? What can a photographer expect from the public when he has no more respect for himself and his work than to charge less than a day laborer's pay for producing it? How much profit, real profit, are you getting out of your business? I do not mean how much you can save on an income of fifty dollars a month, but how much are you getting to lay up against that time in the autumn of life when you may need it?

We can talk about art all we wish; it is an interesting subject, its study is essential to the production of better work and the attainment of higher prices, but the man who is weak on the business side of photography has a hard row ahead of him.

Do not take the figures given in this paper on the cost of material and the other different items as necessarily correct. They will vary according to the quality of goods you are buying and the volume of business you are doing, but do not omit any of the items under the overhead-expense column. Every one of them enters into the cost of a dozen photographs as surely as do the plate and paper you use. The figures are given merely to show that a small advance in price may often mean a big profit at the end of the year, while a corresponding reduction may spell an actual loss.

The cut price is one of the greatest evils we have in photography today. It can be attributed, in most instances, only to the rankest kind of ignorance or indifference. If the man appears satisfied with a bare existence, we may think: "All right, let him stay there," but that is not the way we should look at the matter. It is to our own interest to wake him up and dig him out of his rut. One price-cutter will demoralize a community; and, in doing it, do himself no good. Usually, if given enough rope, he will hang himself, but for the rest of the fraternity in that town, it is a slow and painful process.

More getting together of the photographers in any given community will do a lot of good. There is nothing philanthropic about it. It is hard-headed business and a method that is being pursued by business men in all lines. At such meetings, numerous questions of local interest can be taken up and disposed of. Competition should be more in the nature of friendly rivalry, with the photographers, as an organization, standing shoulder to shoulder against the common enemy.

Really, now, when we stop to think seriously, is not price-cutting just about the very poorest way of getting business, especially the kind of business that pays? A little more knowledge as to the cost of producing, and the chances are we would not have so much of it done.

In conclusion, I would say that if you will yourself tackle the question of ascertaining the cost of production of your own pictures, you will find it an interesting, not to say surprising, problem, and you cannot but benefit by doing so. I thank you.

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Photographic Reagents

By Philip Edelman

THE OLD WELL By S. S. WEBB

LARGELY through lack of published information on the subject, many photographers, professional as well as amateur, go on, year in and year out, using photographic materials and developers without understanding their relation and action. It is hoped that the present article will serve to give them a clear understanding of the uses of the various reagents upon the various papers, plates, and films now in universal use.

The plates, films and roll films now on the market all contain silver bromide and silver iodide in various proportions. These are applied to the plate or film by means of an emulsion. This emulsion is a mixture of gelatine, potassium bromide, silver nitrate, and potassium iodide, usually. Besides these, ammoniacal dyes are frequently incorporated in the emulsion to secure orthochromatism.

When a plate or film is exposed to the light, as through a lens, a peculiar effect takes place. The bromide and iodide silver compounds are changed into a semi-metallic state by the light. In a plate or film the exposure is relatively short, and this change is invisible to the eye. If kept in the dark, the change is permanent. To make this change visible, it is necessary to develop the image by using reagents. A plate or film, after exposure, contains an invisible image in its emulsion caused by the light acting on a part, not all, of the silver bromide and iodide. The problem is, then, to develop this image.

Now the silver salts, which have been changed by the light, are permanently imbedded in the gelatine, and those which have not been acted upon by light, *i. e.*, those in the deeper portions of an under-exposed plate or film, are practically impossible of development. It is for this reason that shadows and detail in the halftones cannot be reduced, even if the plate is over-developed.

Again, it has been established as a fact that whenever soluble chlorides, bromides, or iodides are present in the developer or the plate itself, the action of the reducing chemicals is retarded. Most acids, if introduced into the developing solution, act in a similar manner. On the other hand, an alkali, such as sodium carbonate, hastens the action.

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This brings us down to the requirements of the reagents used. Briefly, these are:

1. They must be energetic and produce warm tones.
2. Cause no stain.
3. Give as much latitude as possible.
4. Cause no fog.
5. Reduce detail in halftones as much as possible.
6. The reagent should be stable, *i. e.*, not spoil on standing.
7. The reagent should be inexpensive; also soluble.
8. The reagent should not be harmful to the operator.
9. The reagent should be adjustable.
10. The reagent should give clear negatives and prints.

As will be seen, there are few reagents now on the market which can pass on all of these requirements. Each has its own advantages and disadvantages, and the ones with the most advantages should be selected.

In the first place, I should like to point out the very close relation which all of the reagents now in use bear to each other. They all depend on phenol (carbolic acid), a white, crystalline solid obtained from coal tar, and are often called coal-tar developers. Phenol is itself nearly identical with benzine, another coal-tar product. The more common and useful developers are given below. They are all compounds of phenol or benzine.

1. Metol or Satrapol: Rapid, brings out details, gives soft negatives.
2. Duratol: Similar in effect to Metol, non-poisonous, very stable and economical, no fog.
3. Eikonogen: Not very soluble, deteriorates, very energetic.
4. Hydrochinon: Acts slowly, produces fog, gives contrast.
5. Edinol: Non-poisonous.
6. Tolidol: Non-poisonous.
7. Glycin: Not very soluble, very adjustable, suited for tank development.
8. Imogen.
9. Amidol or Nerol: Non-poisonous, but of poor keeping qualities, requires no alkali.
10. Rodinol or Citol: Convenient, good keeping qualities.
11. Pyrogallic Acid: Very soluble, adjustable, poor keeping qualities, cheap.
12. Erogen: Non-poisonous, can be used repeatedly.
13. Ortol.

None of these reagents is in itself sufficient as a developer. They are, in nearly every case, Amidol being an exception, combined with an alkali. Sodium carbonate is generally used, though potassium carbonate, caustic soda, or ammonia solution, may also be utilized. The alkali serves largely to open the pores of the gelatine and allow the reagent to act.

Sulphite of soda is used chiefly as a preservative, and prevents, to a great extent, the decomposing and discoloring of the solutions. Used excessively, it retards the action. Potassium metabisulphite is sometimes substituted for the sulphite. Sulphite tends to prevent yellow staining and is essential to nearly all developing solutions.

The majority of the above-mentioned reagents require some kind of re-

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strainer, as, for instance, potassium bromide or iodide. Common salt (sodium chloride) may be substituted as a restrainer. As previously stated, these soluble bromides, iodides, or chlorides, tend to retard and hinder the reduction of the silver salts (mostly silver bromide). In action, these restrainers form a double salt with the bromide in the film, which is less easily broken up by the reagent, retarding the action. With the majority of these reagents, unless a restrainer is used, the image comes up so suddenly that the silver salts are reduced more or less over the whole plate. This is a common fault known as "fog" and tends to hide fine detail. They, the restrainers, should always be used sparingly, as too much causes a variation, usually displeasing, in tone.

The various developers all serve to reduce the image, *i. e.*, change the photo-silver-salt into metallic silver. The exact manner in which this is done is not yet positively ascertained. Personally, I think that the action is electro-chemical. At any rate, there are several important facts which are known. An increase in the temperature of the solution always increases the rapidity of the development. Decrease, on the other hand, causes the developer to work slower. For practical purposes, the range of sixty-five to seventy-five degrees Fahrenheit should not be exceeded. Pure water, preferably distilled, should be used in making up the solutions. Nearly all river water and many well waters contain soluble mineral compounds and organic matter. Their presence always interferes with the proper working of the developer.

Another point which I should like to impress is that of the fallacy of using one certain formula or reagent for all kinds of papers, plates and films, without changing the proportions of the chemicals to agree with the proportions of the materials used in the various makes of papers and films. It should be clear that if a developer is suited to one kind of paper, it should not work as well with another kind which contains ingredients in different proportions. Thus, one paper may not need as much alkali as another, another may need more restrainer, etc. Again, old paper requires modified treatment from fresh paper. I would suggest the following as a convenient method of suiting each grade or kind of paper with its own developer.

Have concentrated solutions of the various chemicals ready and prepare a quantity of solution approximately according to some formula. Then take little test strips of the particular paper which you are going to use; and, after exposing them under an average negative for a suitable time, develop them in the solution, varying the proportions of the ingredients until the right proportions are found. In this way the best results are insured.

Glossy papers present a problem of their own. It is extremely difficult to obtain fine, clear prints on them, unless some particular restrainer is used in the solution. The restrainer usually employed is potassium iodide. I was pleased recently to find one developer, which gave clean prints on glossy paper without a restrainer. This reagent is Duratol, but recently introduced. Its possibilities are great because of its non-fogging properties, its keeping qualities, its being non-poisonous, its economy, and its rapidity.

It seems to me that the tank method of developing plates and films can be profitably modified and used for prints. Indeed, in some tests which I made,

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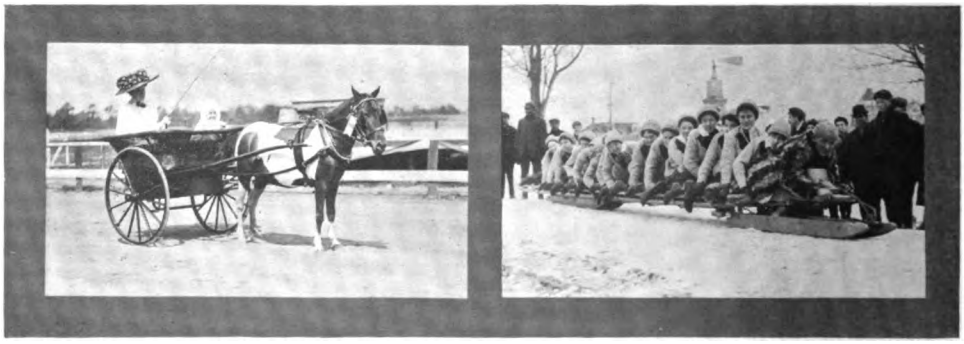
very weakly diluted Duratol solution was used and so regulated that the print took three minutes to develop. Besides the economy, a much larger number of prints can be developed in a given time, because new prints can be exposed while the others are developing. Metol-hydroquinone solution was found unsatisfactory when diluted for the same purpose.

As regards tank development for films and plates, there should no longer be any doubt as to its advantages. However, I think that it is a mistake to use old pyro solution for this purpose, because it invariably discolors during the twenty minutes, and stains the negatives. It seems to me that a solution incorporating a stable reagent, such as Duratol, or even Erogen or Glycin, or a combination of these, would prove much more satisfactory.

There are still a great number who purchase their developers ready prepared. They regard the weighing out and mixing of the small quantities of the substances as extremely difficult. For them I have devised a simple little table, as below. With this, developers can easily be made up according to any formula, with no other apparatus than a common teaspoon. It is perhaps needless to state that developers can be made up very cheaply, at only a fractional part of the "ready made" price. Repeated experiments have shown me that there is a great latitude in making up developers; one or two grains more or less not making any noticeable difference. On the other hand, too much or too little of a substance will make a difference in the color of the developed plate, film or print. This is sometimes pleasing, but more often it is not. To me, there is almost as much pleasure in making up my own developers as there is in doing my own developing. I use the following table:

Sodium sulphate (dry),	one teaspoonful.....	120 grains
Sodium carbonate (crystals),	one teaspoonful.....	120 grains
Hydroquinone,	one teaspoonful.....	40 grains
Metol or Satrapol,	one teaspoonful.....	40 grains
Duratol,	one teaspoonful.....	40 grains

All the coal-tar developing materials have approximately the same specific gravity. There are sixty grains in one drachm, eight drachms in one ounce. A pint of water weighs approximately sixteen ounces, using a pint Mason fruit jar as a measure.



AT THE HORSE SHOW
F-8, ¼-in. slot, high tension
512

FORTY MILES AN HOUR
F-8, ¼-in. slot, highest tension

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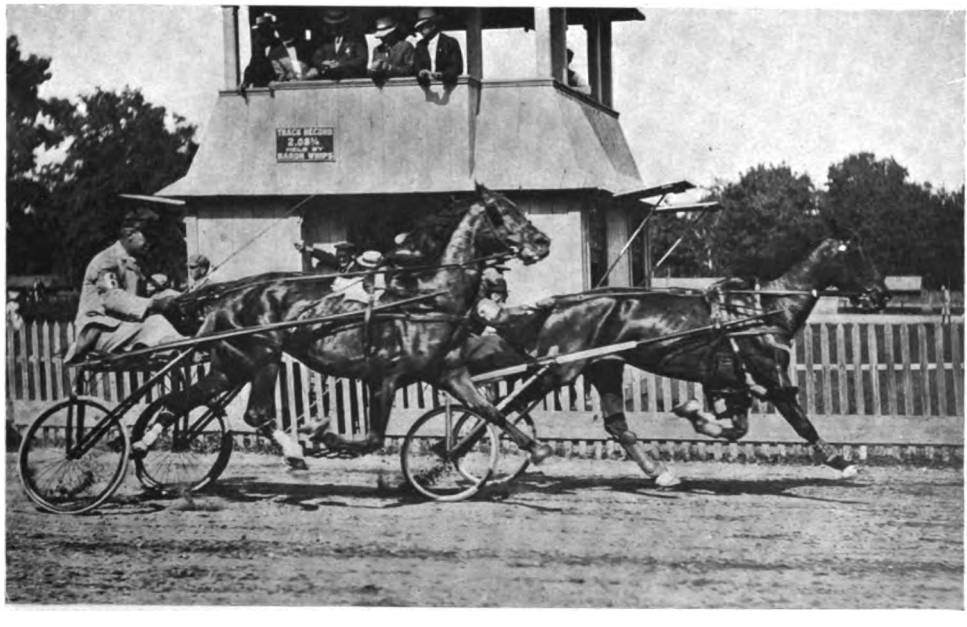
Speed Work With An Inexpensive Outfit

By James Victor Feather

Illustrated by the Author

About the first speed picture I ever made was one of a racing automobile in the first Vanderbilt Cup race in 1904. It was, in fact, my first successful one. Since that eventful October morning I have made great strides in the art and science of photography, have made, in fact, a business of it; and still, were I asked to duplicate that picture with the same conditions prevailing, I know it could not be done. I had, for my equipment, a 4x5 folding golf Montauk, fitted with a Wollensak lens and shutter; the latter's fastest speed being the regular one one-hundredth of a second. I reasoned, in my blissful ignorance of those days, that if it gave a speed of one one-hundredth of a second at full opening, the speed at stop 64 must be nearly one eight-hundredth second, the shutter having only a fractional part of the lens to open to the light. I set up the camera and waited for the first racing monster to show up; then, click went the shutter. Now you can all laugh as much as you please; the plate was a Cramer Crown and I developed it with an M-Q tube of ready prepared developer, and you may believe me or not, the image showed up,—in time. It took a long time, I will admit, and when it was all there, there wasn't much to it.



TROTTING, 2:20 GAIT
F-8, ⅛-in. slot, high tension

ALL EIGHT FEET OFF THE GROUND

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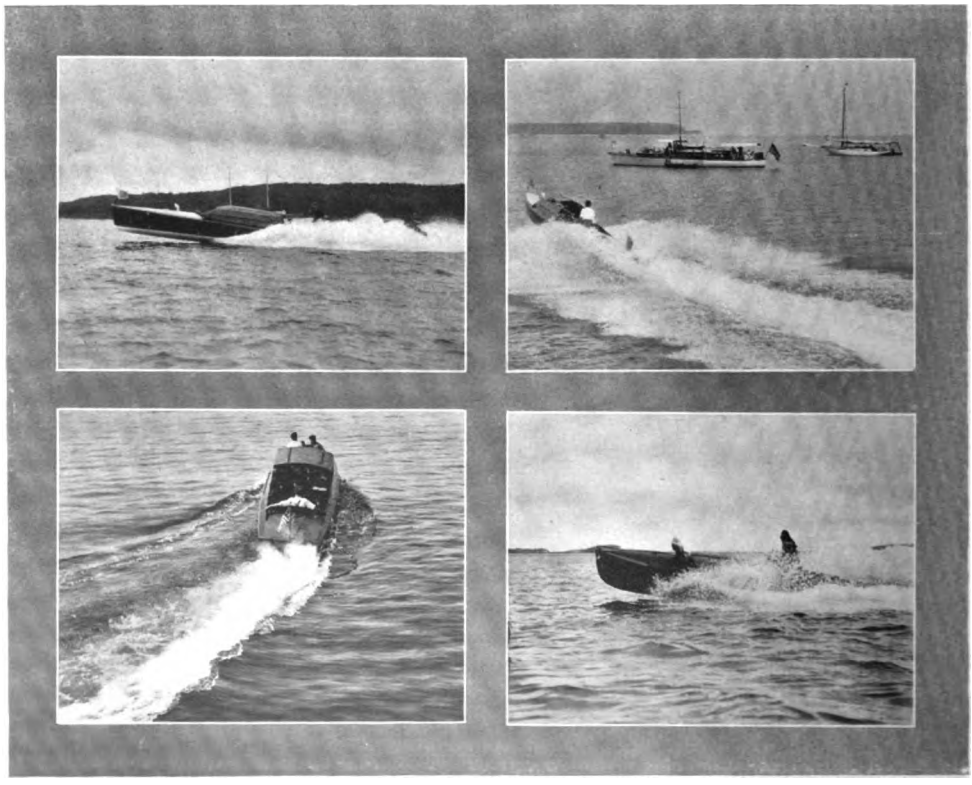
Still, with regular Velox and very accurate exposure, I could get quite nice prints. I sold them by the hundreds; it being about the time that post cards were just coming in, and I sold all I could make at ten cents apiece. Later, when Christmas came along, I made prints and used them on calendars, selling large numbers of them. Of course, I realize now that it was all an accident and I know that I couldn't do it again in a thousand years. It was what my wife calls the luck of babies, drunken men, and fools.

Well, anyway, as I progressed I naturally wanted a camera that would make this kind of picture with certainty, and accordingly sent for every catalogue on the subject. Well, sir, the money the manufacturers wanted for those outfits was enough to prove to me that I could get along very nicely without one. Not only were the cameras high priced, but the only kind of lenses that could be fitted to them were still higher; and when one spoke of using a rectilinear lens,—say, it was awful the looks the dealers would cast at one. It was no use; I couldn't have one, and that settled it. Didn't have any use for one, anyhow; it wouldn't be once in a year that I should need it, so why tie up so much money? So I went along for three years doing a good business and getting where I could afford to buy a nice camera; still, in all those three years, I had not had a job that my regular outfit was not capable of handling. Nevertheless, I often thought I would get myself a reflex type of camera, posting up



RACING MOTOR BOATS
514

F-8, ⅛-in. slot, highest tension

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SHEEP GRAZING, F-8, ½-in. slot

STEALING SECOND, F-8, ¼-in. slot

on some more catalogues; but it was a delusion; the prices did not drop a penny.

One day the manager of the local boat-builders' firm came to ask me if I could make him a picture of a motor boat they had just launched, one which it was estimated would cut the water at a forty-mile-an-hour gait. He wanted a broadside view of the boat at full speed. I knew I could not make it and told him so, whereupon he said he would try the other photographer up the street. I told him the other man couldn't do any better than I could, but the other man was not so frank in the matter, and tried it. As might be expected, he fell down on the job. Meanwhile, I had been thinking it over, coming to the con-

HOOK AND LADDER RUN

F-11, ¼-in. slot, fast tension

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clusion that here was a man who wanted speed pictures, and if the local man couldn't make them, he would send to the city for a man who could. I had always prided myself upon the fact that I could make any kind of a picture that the average country photographer would ever be called upon to take, and the idea of an out-of-town man getting the local money didn't appeal to me. So the next time I saw the boat builder I told him that I had ordered one of the high-speed cameras and would have it in a day or so. I caught the next train to New York and bought a 5x7 Hall camera. I did not have enough money to buy a higher-priced one, or enough, that day, to buy an anastigmat lens. I decided I would try my rectilinear, and if it would not fill the bill, then I would get a better one. I bought some special rapid plates; and, as soon as I got home, tried the thing out.

Well, I have been kicking myself ever since because I hadn't known enough to buy this outfit years before. I am sending herewith some pictures made with the rectilinear lens, and I often wonder if they could be improved upon by using a higher-priced lens. My purpose is not to claim that high-grade lenses are not superior to the humble rectilinear, but to show that very creditable work can be done with the lower-priced one. As a matter of fact, most pictures can be made with an f-8 stop, so why should one avoid speed work because he cannot pay a big price for a lens that he will have to stop down most of the time, for when one gets much above f-8 the definition is very vague, except in one small plane.

The examples shown cover a wide variety of work and show subjects in different light. Some were made on cloudy days, others were made with the camera pointing directly into the light. Some were made on plates that are not supposed to be ultra rapid ones. At the same time, I do not wish to convey the idea that speed work does not mean a constant danger of under-exposure. The pictures shown are satisfactory, and yet one had best be sure of his light before trying to duplicate them.

After a year's use, the little black box is my most highly prized possession. Do I find much use for it? Well, say, it is surprising what a lot of extra business I have done since I got it; business that, before, I did not think existed. And it is so easy. One watches his subject up to the instant he wishes to take it, then a slight pressure of the thumb and it is all over. One turns the plate holder and is ready for the next exposure. The wonderful results one can show his customers are bound to bring results. If there is to be a horse race or a boat race, out comes the reflecting camera, and the pictures command a ready sale every time. The local horse show was a source of great profit to me; without this camera I would not have been able to have made a dollar out of it. The before-mentioned firm of boat builders find they can tell better how their boats are going from a picture than they can by watching them, and whenever they have anything new to test out, the first thing they do is to call me up and have me make pictures for them. They have been very enthusiastic over my pictures, displaying them on every occasion, so that I now get a lot of this work from boat and yacht owners. And so it goes, one job brings another; every day the observing photographer can find fresh subjects for his skill, and subjects out of which he can make money.

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The Wonderful Ruins of Petra

By Jacob Spafford

With Illustrations by F. O. Baldwin, of the Photographic Department of the American Colony, Jerusalem

Photographic conditions being as peculiar in Petra as they are at the Dead Sea, and this unique and wonderful ruined city having recently been visited by a few members of this Department, it has occurred to us that a few of the views obtained there, together with a short article, might not be without interest to the readers of CAMERA CRAFT. These photographic peculiarities arise out of two conditions. There is the sombre light in the canyon by which the city is reached, and then there is the great variety of shade and coloring in the strikingly veined sandstone in which the region abounds. An idea of the beauty and brilliancy of this coloring can only be conveyed by comparing the curious and irregular stratification of colors to watered silk. The illustration herewith gives some suggestion of its appearance. We have on our shelves over a dozen bottles containing different colored sand from Petra, varying from purple and crimson to ochre and pure white. These two conditions unite to make the region probably more trying, photographically, than the world-famous Grand Canyon of Arizona.

ROCK VEINING AND COLORING OF WALLS. INTERIOR OF A TOMB

Petra lies about one hundred miles, south by east, from Jerusalem, as the crow flies. To reach it, up to the time the Hedjaz line was laid, eight days' journey. The way, traversing either route, lies through trackless desert regions, roved over by the wild Bedouin tribes, making the journey at all times expensive and difficult, often hazardous.

Although Petra is one of the wonders of the world, it was not until within a hundred years that the first modern English traveler, Burckhardt, rediscovered the site, which for more than a millenium had been lost. Here it was that Esau, or Edom, the brother of Jacob, was settled and this was his capital; a capital protected, perhaps, better than any other city in the world. A city so situated that the prophet in speaking of it resorted to the simile of the eagle,

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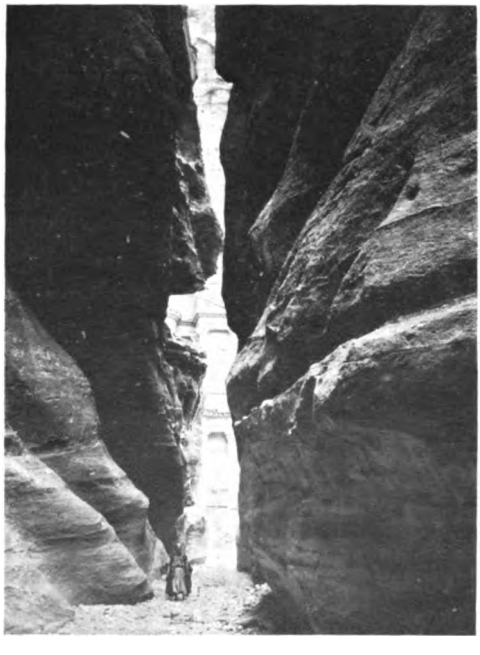
saying that though as securely nestled in their eyrie, yet thence should they be brought down, and Sela be no more inhabited; and so it is today.

The only approach to the city is through a narrow "sik" or gorge, about a mile and a half in length. This is often only about fifteen feet wide, its walls about one hundred feet high, often overhanging and overlapping so as to entirely cut off the sunlight. Passing through this wild, winding chasm, the visitor suddenly, as if by enchantment, finds himself standing awed before the beauty and grandeur of one of man's most wonderful works of art, so unexpectedly contrasted with the wildest of virgin nature through which he has just passed. Everything seems to conspire to make Khazneh Fir'aun (Pharaoh's Treasury) the most striking sight to be seen. The coloring is superb, the architecture most graceful and handsome, the proportions magnificent, the detail lavish, the whole stupendous and colossal. This sepulchral shrine stands one hundred and thirty-eight feet high, chiseled out of the living rock into which it sets as a picture in its frame.

The ravages of time, eighteen hundred years, have told less on the temple than the childish yet determined cupidity of the Arabs, who, with such crude tools as they had, went to the enormous labor of cutting through one of the five-foot pillars supporting the portico in the hope that they might bring down the urn that surmounts the graceful central tower. This urn, legend says, contains the treasures of Pharaoh, and they wished to make it yield its hidden hoard. It is still practically perfect.

A small, level opening, three-fourths by one mile, lying between hills about six hundred feet high, marks the location of the once opulent city of Petra. The architecture of these people, their respect for their parents, their beliefs,



FIRST GLIMPSE OF EL-KHAZNEH FROM ES-SIK

THE GORGE OF ES-SIK LOOKING EAST

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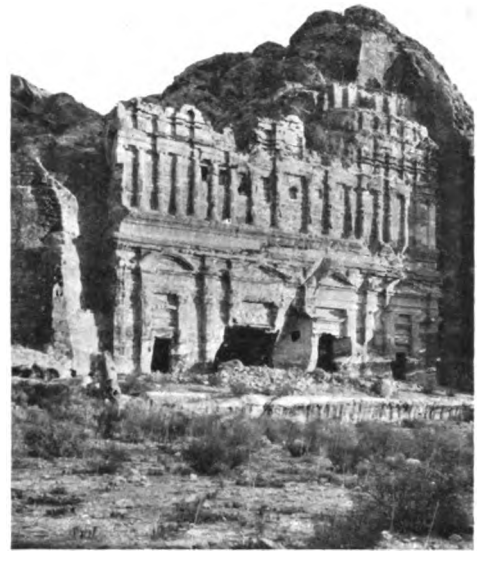
THE ROCK-HEWN THEATRE

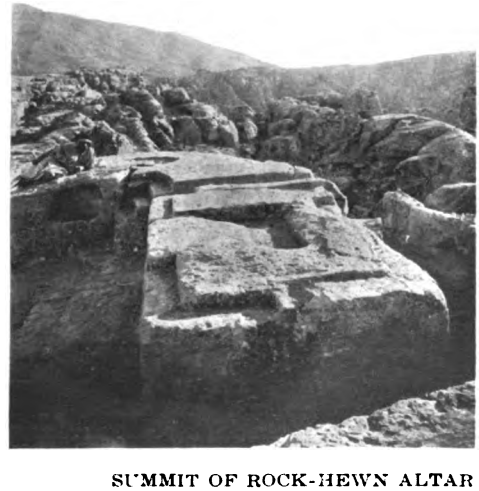


FACADE, THREE-STORY TOMB

and the eternal conditions, are all manifested in the huge sepulchral monuments, over eight hundred, chiseled, sometimes in three tiers, into the sides of these brightly colored rocks. The largest of these, the rock-hewn temple for the worship of their King Dushara, who lived about 200 B. C., after his deification, is one hundred and forty-four feet in height, the smallest having a facade of about thirty feet.

About one hundred of their Nabatean inscriptions have been recovered,

MODERN SUCCESSORS OF THE PETRANS



SUMMIT OF ROCK-HEWN ALTAR

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and these unfold a part of the history of this city and its people; a city which had its rise and eclipse in the passing by and later deviating of the trade route between Damascus and Mecca. The rediscovery of Petra has yielded an understanding of what was meant by the "high places" so often mentioned in the Bible. Thousands of steps, cut in the rock, form stairs leading to the places of worship here on the mountain top, where a court, thirty by forty feet, was sunk in the rock. In the center stood a level rock platform for the presentation and slaughter of the sacrifices. This was in line with the altar, which faced Mount Hor, where, according to a late legend, Aaron was buried; on the steps by which this altar was ascended stood the priest, who poured out the libations and waved the offering. As soon as this ceremony was concluded, the guests, reclining on the three inclining sides of the court as in a Roman Tricliuium, had the sacrificial feast served to them on the lower inner edge of the parapet. The priests partook of their repast, apart, reclining around a circular sunken court, in the center of which the food, called stibadium, was served.

The Petrans' concern about the water supply for their city resulted in a tunnel, thirty feet high and thirty feet wide, through a mountain, in order to divert the winter torrents around instead of allowing them to flow through their city. During the Roman occupancy, a large theater having thirty-three tiers of seats and capable of seating four thousand people, was hewn out of the rock in front of some of the principal tombs, the conquerors seemingly disregarding these tombs entirely. About thirty varieties of wild flowers were encountered during the journey in November. The greatest altitude reached was five thousand feet above sea level in the desert of the wanderings of the Children of Israel, while twelve hundred feet below sea level was the lowest point reached. The temperature varied between one hundred degrees and thirty-six degrees Fahrenheit, the latter being experienced on the uplands of Moab, near Madeba, made famous through its ancient mosaic map discovered in 1896.

A Camera In Petra Thirty Years Ago

By William H. Rau

Illustrated by the Author

Looking over, at that time, the April issue of CAMERA CRAFT, I was much pleased at finding the pictures of Petra, that rock-cut city of Arabia, which I visited with Edward L. Wilson, of *Wilson's Magazine,* in 1881. Our experiences were most exciting and we were kept in constant turmoil and anxiety as to what might happen, as we could not go anywhere without being shadowed

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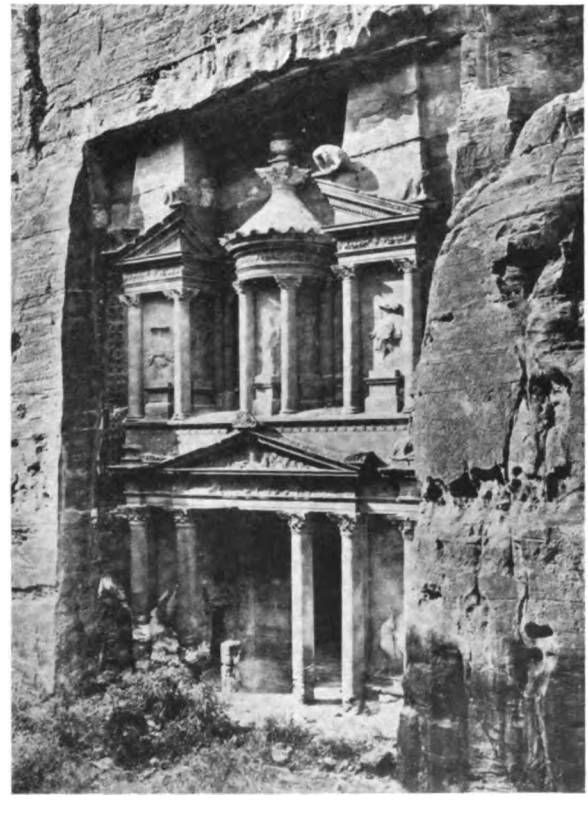
and followed by either Bedouins or Fellaheen, or both. And this, despite the fact that we had one of the most expert dragomen, one named Heddaya, of Alexandria, the man who had been there with the author, Henry Clay Trumbull, who tried to locate Kadesh-Barnea.

The Bedouins, under Sheikh Salim, were most annoying, but it seemed necessary to pay their demands in order to have their protection from the Fellaheen, who are the serfs of the country. Even then, if permitted, they would have stolen everything we had. As it was, they were covetous of every bit of bright brass, and, although we kept constant watch, they succeeded in cutting away the brass corners from our trunks. We had had special wooden boxes made, fitted with corner separators to keep the plates from touching each other, each in a sealed tin case, two of which fitted into a trunk-like leather case that could be carried on camel back without risk of breakage.

In the picture herewith, Sheikh Salim is seen in the foreground with a fifteen-foot spear in his hand. The band has just emerged from a cave after having had one of their devilish meetings, held, seemingly, to fight over a division of the money extorted from us. It seemed that a number of the others were not satisfied with their share of the robbery,—for that was what it really was. Salim had received the money in small coins and tied it up in his numerous garments, so that when he walked about he was well loaded down with a lot of silver. They would come to our dragoman and ask for barley for their horses, to be told that he had no barley. "Give us money to buy barley," was next demanded; met with the reply: "You cannot get any barley here." Whereupon the demand from Salim was: "Give us the money."



KHAZNEH FIR'AUN OR EL-KHAZNEH

Perhaps the most impressive feature about Petra is the approach to the wonderful valley through the gorge or sik, a narrow, winding cleft in the rock, over a mile in length, and on leaving which one comes out facing the beautiful temple-tomb called El-Khazneh. The largest sepulchral shrine is El Deir, situated some twelve or fifteen hundred feet up the

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gorge. It is about one hundred and fifty feet square and was at one time finished with steps. It faces directly toward Mount Hor, on which a late Arab legend locates the tomb of Aaron. As showing the general appearance of the valley, the picture given herewith will be of interest. It shows the Kasr Fir'aun, or "Palace of Pharaoh," and the fallen arch in the immediate foreground. In the distance will be seen the method employed in cutting these temples in the rock. They began at the top, and, in this case, had only finished the capitals when the work was stopped.

SHEIK AND CAMEL

Our approach to Petra was over the mountains shown in the picture below. These mountains are terraced for many miles and at one time supported a large population. Far in the dis-

BEDOUIN SHEIK AND ARABS

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MOUNTAINS OF PETRA FROM ABENE

A RUIN, CALLED BY THE ARABS, PHARAOH'S PALACE

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BEAUTIFUL EL DEIR

tance is Mount Hor, and among this mass of red rock and sandstone is Petra, the rock-cut city through which Moses tried to pass with the Israelites, but was repulsed. Starting to cross the desert over which wandered the Children of Israel, we were under the guidance of Sheikh Musa, chief of all the Bedouin of Sinai peninsula, numbering about five thousand.

Long Ago and To-day

I have just completed an A1 writing desk; utilizing an old mahogany desk of 1867 for the upper part, and an old black-walnut dark box of 1865 has been cut up to furnish doors and ends. I have put these together to preserve them; and, ere long, hand them down to "the boy" as relics of "long ago."

"Today" things are different; new ways, new ideas, and new results. That old dark box carried my camera and the necessary chemicals for wet-plate work, many, many miles in 1865, '66, and '67; and it is deserving of a kinder fate than a final resting place on the scrap pile. Hence, I have found pleasure in working it into a useful desk.

What the future has in store for the progressive members of our craft, *quien sabe?* Certain it is that the one who presents the best looking apple to the eyes of the public will find a larger number of open mouths ready to bite than he who has but a withered, discolored thing for bait. And his results are pretty sure to cause him to think: Far better for me that, while I strive to understand more clearly the needs of "Today," I should not neglect to take a few lessons from our gray-haired craftsmen of "Long ago."—OLD FORTY.

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

A PRINT DRYER: The room I use for my photographic work gives me none too much space, and besides, it must be kept in a fairly decent condition as to appearance. A rack full of muslin-covered screens was out of the question and a large drying drum would have been quite unsightly. The difficulty was solved as follows: I secured five yards of the widest and cheapest muslin obtainable. Using a strip of card as a binder to prevent the tacks pulling through, I fastened one end to the under edge of a shelf, the top one of a set at the end of the room. The other end of the muslin I fastened in like manner to a piece of thin board about five inches wide. When in use this strip of muslin extends from this high shelf downward to the floor to form an inclined muslin screen upon which the prints are placed to dry. When not in use, one simply winds up the length of muslin on the thin board which forms the loose end and deposits the miniature bolt of cloth under the shelf to which the other end is attached. In my own case this bolt rests on the top of some books which occupy the shelf below.—A. M. O., New York.

A GOOD ENLARGING TIP: One frequently wishes to hold back some local spot in enlarging; and, while it is an easy matter to dodge or hold back any portion near the edge, such as a sky or foreground, a small area near the center of the print presents some difficulty. For a long time I used a long hat pin, tearing out the desired spot of opaque paper and attaching it to the point by running the point through the paper. This worked fairly well except that with small pieces of the paper, where the motion during exposure was not great, the pin itself would cut off some light. One day an old hand suggested the use of a strip of glass instead of the wire of the hat pin. This was tried, with the most gratifying results. A touch of paste holds the piece of black paper on the end of the glass strip and it can be held in front of the spot to be held back with the greatest ease and with no fear of any portion being shaded except that part of the print directly behind the black paper mask.—W. B. H., Massachusetts.

MAKING UP FORMULAS: The usual method is to hunt up the formula, then select, for each chemical, the desired weight or weights as they are weighed out. I think my plan is a better one. I have a number of small paper boxes that fit into a little rack on one of my shelves, each box bearing a label on the end showing what formula it represents and the bulk generally made up. If I want

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to mix up a certain developer, I simply take down the box so labeled and find that it calls for eight ounces. In the box is a set of weights, one for each of the chemicals named, these weights cut out of various material according to the weight of the chemical required. The lighter ones cut from sheet celluloid, the heavier ones from sheet lead, and still heavier ones in the form of blocks of lead. Some are cut from pieces of cigar box wood, even cardboard being utilized in some cases. The making up of the set presents no great difficulty, as one can easily understand.—J. A. G., Kansas.

A LENS SHADE: The modern lenses are somewhat lacking in the way of sufficient depth of flange to prevent strong light striking the front combination when working with the sun other than back of or well to the side of the camera. I have always intended to construct a folding lens shade, but never got around to it. Recently, having to order a few jewelry cases, I thought I would order a plain tube lined with black velvet, which I did. The velvet makes it a snug fit for the front of the lens tube, and the length I decided upon by making a few experiments with a rough tube made out of a piece of card, cutting down its length until it just failed to cut off the corners of the plate. The lens cap was given the case maker as a measure for the size, and while he was about it I let him make a loose-fitting lid for front end in case I wished to make a cap exposure, using this lid or cover for a cap. I have found this shade to work wonders in the way of improving the quality of my negatives, particularly those of distant landscapes. Even when the sun is well behind the camera, the bright light from the sky in front is enough to degrade the results in the matter of the landscape below.—W. W. H., Ohio.

SUBSTITUTE FOR A LENS CAP: I was recently called upon to make some home portrait negatives at a place that I was visiting, but found that my lens cap had been left at home, it being rarely used, and the shutter refusing to work on time or bulb exposures. I took a strip of black cloth, about the width of the lens board, folded it to get four thicknesses, tacked one end of the folded section along the top of the camera front, and with a couple of pins fastened a small stick in the lower end of the fold. Exposures were made by taking hold of the stick, raising the curtain which the folded cloth formed in front of the lens, and, when the exposure was completed, allowing it to drop back into place. In fact, I found this "curtain shutter" such a convenience that I have made a little neater one and keep it permanently attached to the camera. It is an excellent protection against dust and spray, and when not wanted lies back over the top of the camera with the stick resting in one of the grooves of the bellows. It also makes an excellent sky shade when required.—H. M. B., Illinois.

IMPROVING THE FINDER: My favorite work is street scenes, and as most city streets do not afford the best light, it is necessary to use a quite large stop. This necessitates being fairly accurate in the matter of setting the focusing pointer. I have overcome most of the difficulty by simply ruling a few lines across the face of my finder, using Higgins' waterproof ink for the purpose. The upper and lower lines indicate the space occupied by a person of medium

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height at a known distance; two other lines just within these two are the boundary lines of a figure at a little greater distance, also known, and the two inner lines indicate a third distance. These lines were drawn by using a ground glass at the back of my 3A Kodak and having a friend stand while the three-sized images were located in the finder, the lines drawn, and the focal distance found. Now all that I have to do is to decide which size I wish my principal figures, set the focus at the right figure on the scale, and simply walk towards my group until the image of the principal figure just touches, with his head and feet, the proper lines on the finder, and make my exposure. It is all much simpler than this description would indicate and makes it very easy to make snaps of street groups with a wide-open lens and without any risk of getting blurred figures through making a wrong estimate of the distance.—W. G. H., Illinois.

BLISTERS: In the February number of CAMERA CRAFT, "J. M. K., New York," complains of trouble with blisters when using developing papers. There was a time when I had the same difficulty, but by experimenting I found a way to avoid them. The whole trouble, apparently, lies in the hardener which is added to the hypo bath. If it is not properly compounded, blisters are liable to result, as also if insufficient hardener is added. If J. M. K. will compound his fixing bath according to the following formula, I think his troubles will be at an end so far as blisters are concerned. Take a large bottle and make up a stock solution of hardener, as follows:

Water	10 ounces
Commercial acetic acid	6 ounces
Sulphite of sodium (dry)	1 ounce
Powdered alum	1 ounce

When preparing a fixing bath, take:

Water	32 ounces
Hypo	8 ounces

When dissolved, add three and one-half ounces of the above hardener. I have been using this fixing bath for several years, both for paper and plates, and cannot see how it could be improved upon. Further, if one has some prints which, on account of warm or old developer, have turned slightly yellow, allowing them to lie for from twenty-four hours to two or three days in an old fixing bath compounded as above, the stain will be removed, if not too intense. I have saved a great many prints in that way.—Phil A. Friedell, Montana.

A HOME-MADE DUPLICATOR: Cut a circular piece of cardboard that will fit snugly inside the outer collar of the lens mount. Clip a segment off the side and you have a duplicator that will accomplish anything that any similar device will produce. The amount to be trimmed away can be found by observing the ground glass while the partially trimmed circular card is in position. It should be blackened with ink or any convenient stain or paint. Besides the freak pictures made possible by this simple device, it is often of practical value when it is desired to make two exposures on one plate.—F. Belmont Odell, New York.

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INEXPENSIVE REQUISITES: It is surprising what a number of handy additions to one's outfit are purchasable at the ten-cent store. I found, in such an emporium, a small reading glass of good magnifying power, handy for fine focusing for examining prints and negatives, and for spotting and retouching. Small black and natural wood frames, containing cheap pictures which can be thrown away, substituting photographic prints, make neat framed pictures for one's room. Take an occasional tour of inspection through these ten-cent emporiums.—F. Belmont Odell, New York.

AN EASIER WAY: Some time ago a writer in CAMERA CRAFT told of "An Easier Way with Roll Film," and since then several others have added to it. all good kinks, too, so I'll give mine. I have been using this method with roll film for the past two years (for the reason that I have but one hand), but instead of using a tray, I use an ordinary small bowl for the smaller films, and for the larger ones I have a narrow glass dish, about three inches deep and six inches long, which I picked up in a ten-cent store, for a dime. The film rolls up better in a bowl than in a tray and the developer does not slop over.—J. H. Raubert, Minnesota.

TO CLEAN TRAYS: A piece of red rubber gas tubing about four inches long makes an excellent scrubbing brush for trays. The kind desired has a grain or tooth on the outside, and used flat or bent back on itself, it will remove fairly new deposit with water alone. If the deposit be of long standing, a little nitric acid in water will cut it loose and the tubing will complete the work.—Excel, Ohio.

HOLES IN GLASS: A short time ago I noticed some one asking how to bore holes in glass. Will say that a great many opticians use a jeweler's small, round file with a three-sided point ground on it, and for a cutting liquid use "3 in 1" oil.—W. S. Gerts, Illinois.

"There are certain aspects of truth which are discernible neither by scientific process nor by mathematical demonstration. The truth that a melody of Mozart's, that a painting of Rembrandt's, that a poem of Keats's, that a scene on the Hudson, is beautiful, cannot be proved by any scientific method; neither is it susceptible of mathematical demonstration. One who denies that this melody, or picture, or poem, or scene is beautiful cannot be persuaded by any amount of evidence; he cannot be convinced by any process of reasoning. Truth of this kind only can be apprehended by a kind of sympathetic understanding. By whatever name we call it, whether intuition, or artistic temperament, or spiritual insight, this power by which we seize on truth is as real a power as the power of ratiocination, or the power of weighing evidence. Indeed, this power brings truth closest to us; in discerning truth, it makes truth a part of us; not something outside of us to be observed, but something within us to be experienced. . . . If we would understand art in any of its forms, we must live in its presence; we must see good pictures, hear good music, read good books."—THE OUTLOOK.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1911 • No. 11

"Paragraphs Photographic" Last Month

At the last moment a slight change in the reading matter necessitated cutting down our "Paragraphs Photographic" department, last month, to two pages. There was no lack of material, but the substitution of a new article somewhat longer than the one originally intended, cut down the available space. This explanation is due kind friends who have so generously contributed to the department. Their contributions are being used as fast as possible, the only ones held back being a few requiring line cuts as illustrations, these last having to await the convenience of our artist, who is not exactly "our own special artist," but one who has to give his special attention to more remunerative work.

Opportunities On The Pacific Coast

We are constantly receiving letters from photographers in the East and abroad asking as to the opportunities here on the Pacific Coast. These letters we try to answer with every care and patience, but the writers, as well as others who would ask the same questions, should bear in mind that it is impossible for us to do more than suggest the situation. It is safe to assume that conditions are practically the same all over the country. When two weeks' wages will carry a man across the continent, it is obvious that the distribution of overlooked opportunities can hardly reach any degree of importance in any given section. There are opportunities here just as there are in the North, the South, or the East. There are, also, hundreds of photographers in this section who simply make a bare living out of their photographic capabilities. Much more depends upon the man than upon the location; in fact, it all depends upon the man. There is a small mining town in the northern part of the State that is just as prosperous today as it ever was. Work there has been continuous and uniform. Some years ago a photographer went there, opened a studio, bought the lot on which it was situated, bought a small residence, a small automobile, and accumulated some money before removing to a larger town. The place is now closed up, or rather, has been given over to another line of business. Some four or five different photographers have failed to make a living in the town since our original photographer left. And there was no handicap about it, as the original owner did not sell the gallery, simply renting the building to his successor at a lower rental than he is now getting for it from a tenant in another line. And this is but one example in a hundred that we could mention. The place held opportunities for the one man; it was a sorry disappointment for the four or five who followed. Candidly, we would not advise any one to start a studio there.

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Nine out of ten would fail, and the tenth man, the one who would make a success, could do much better in a larger place where the opportunities were greater. And we are not going into this matter in an effort to discourage the inquirers. Write us as often as you wish; our best services are at your disposal. But do not blame us if our replies are not just what you might wish. We could tell you that opportunities were numerous and inviting, and you might meet with disappointment. We might tell you that they were rare and inconsiderate, while you might learn of successes that would lead you to think we had misrepresented matters to you. Our advice can help; it cannot assure you success or guard you against a mistake.

The Growing Popularity of the Flashlight

From the number of letters that come to us asking about the practicability of the flashlight for studio work, it is plain to be seen that this form of illumination is rapidly gaining in interest. The one great handicap that prevents an early and full appreciation of the possibilities of the flashlight is the almost universal belief that a flashlight negative means staring eyes, chalky highlights, and dark, objectionable shadows. Nothing can be farther from the real facts. It is true that an undertimed flashlight presents these objectionable features. But there is no more excuse for undertiming, that is, using too little powder or a powder having insufficient actinic quality, than there is for insufficient fixing of plates through using too little hypo. With the right amount of powder, and that is easily determined, the flashlight will give more and better texture in flesh and drapery, make less retouching necessary, and give more orthochromatic effects, than will daylight. In addition, it gives one, by its instantaneousness, a power in child portraiture, and in dull weather, that must be used to be appreciated. Roundness, modeling, balance of light and shade, all are, as in ordinary daylight work, a matter of the right placing of the subject, right use of screens, and right placing of the light. If anything, the advantage is again with the flash. The advertisements of several firms who will be pleased to take up the matter with interested parties, appear in another section. While not wishing this to be taken as something written for the purpose of calling attention to any advertisement, we would urge that the facilities placed at the disposal of those desirous of trying flashlight work be investigated.

William P. Buchanan Passes Away

William P. Buchanan passed away Friday, September twentieth, at his home in Philadelphia. There has, perhaps, never been a more widely known or more popular dealer in photographic supplies in this country than was Mr. Buchanan. His popularity with the photographers was earned by his strict honesty and earnest effort to satisfy their wants in the best possible manner. To those who came into personal contact with him he endeared himself by his charming personality and kindly manner. A wide circle of friends will mourn his loss as that of a dear friend, and thousands of others, who knew him only as the head of a good firm, will learn of his passing with regret and sorrow.

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THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

ABOUT LEARNING HOW

Did you ever stop to think what a waste of time, money and energy was expended by the average amateur in learning how to make a good negative and a good print therefrom, doing it every time; and, if he so desires, incorporating into the resultant photograph a decent amount of pictorial quality? And yet it is all quite simple and plain. Photography is one of the most exact sciences with which we are asked to deal. When the camera is pointed at a view the plate will receive the same image as is seen upon the ground glass or in the finder. True, the resultant print is in monochrome while the view may have all the colors of the spectrum, but the use of a piece of blue glass will allow the worker to see just how a scene will look in black and white. The exposure is simply a matter of complying with requirements as definite as multiplying two by two to produce four. The speed of the plate or film is a fixed quantity, the stop of the lens is another, the strength of the light can be measured exactly, and these factors known, the correct exposure is determined absolutely. Developing the plate is a simple matter of a certain developer allowed to operate for a certain length of time at a given temperature; and so on through the entire process. Even down to the matter of producing pictorial work, which is the first step into the realm of personal choice, personal responsibility, quite a degree of excellence can be attained by merely eliminating that which is wrong; and the wrong can be identified and guarded against.

And what does all this show? It shows that the average worker takes up the work in entirely the wrong manner. He goes through all the details of producing a print, in a more or less understanding manner, only to find that this result is poor, that good, the next ten poor, and so on, as long as his patience lasts. His patience being sufficient, he does, gradually, absorb a certain amount of skill that gives him a slightly larger proportion of passable prints as the result of any given number of exposures. But why is the improvement so slow in coming? Simply because he has not recognized the fact that everything is exact, fixed, predetermined by the conditions. Or, even if the fact be recognized, he does not avail himself of the knowledge at his disposal simply because no one factor has been rightly considered. Failure leaves him in entire ignorance as to its cause, or as to how it can be avoided in the future. Take the simple matter of a negative. Suppose the worker make sure that his exposure is right, that his developer is right, and the temperature of the solution is right; then, if the resultant negative is not right he knows that the time of development was wrong. The making of a good negative is only a question of having everything right, and having everything right is not difficult. One can obtain from any stock house in the land a supply of powders or tablets that will make up a standard developer that will, if the solution be of the given temperature, make a fine negative with a given period of development, if the exposure be right. All one then has to do is to adopt some system of timing his exposures and submit them to this developer. If good negatives do not result, he can assume that his shutter does not give the time indicated or that he is not using his exposure system correctly. He knows just where to look for his mistake, just where to find it, and just how to remedy matters in the future. And so he can go on, determining just what is right in every case, and success is just as assured as it is in any other field.

Of course, a large number of beginners do not know just what a good negative looks like, but even that is no serious disadvantage, because they know what a good print is like, and they have only to use a reliable paper with a good standard developer and the results from a series of negatives will show which one of the lot is the best. The negative that produces a good print, without

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any modification of the process of printing, is pretty sure to be a good one. But the beginner can always get an expression of opinion from some other photographer; or, if no such counsel is at hand, a few negatives sent to the editor of his favorite magazine will bring the information. In fact, it would well repay any beginner to purchase, at the beginning of his career, a good negative to be used as a guide or standard. It would come in quite handy in testing his printing methods. At any time that he doubted his paper, his developer, or his manipulation, all that would be necessary would be to make a print from this good negative. Knowing the negative was right, he would know that any failure was due to wrong exposure, bad paper, or improper developer. Trying a sheet of another brand of paper would show whether the fault was there, making a series of exposures of different durations would determine that, and mixing up a new developer would show if the fault was in the one first used.

Of course, there are a few outside influences that may cause one trouble. The ground glass may not be in register with the plate that takes its place when the holder is inserted; the focusing scale may be wrongly marked or placed; the camera may leak light; the dark room light may be unsafe or a few other difficulties present. But any and all of them are easily located and removed by the same system of elimination. It is an easy matter to place a series of business cards on the steps of a porch, focus carefully upon the central one with the lens wide open and make an exposure. If the one focused upon is the sharpest, the ground glass is right. If it be out of focus and a nearer one be sharp, the ground glass is too close to the lens; if a more distant one is sharper, the glass is too far, and the matter should be adjusted. With a focusing scale simply tack up something on a wall, measure and set up the camera at one of the indicated distances on the scale, set the pointer at that distance, and make an exposure. A piece of ground glass across the open back of the camera, its ground surface in contact with the rollers carrying the film, will make it unnecessary to even make the exposure. The same way with an unsafe light. If it be suspected, one need only place an unexposed film in the tray and develop for the usúal length of time. If it does not remain creamy white and fix out clear, the light is unsafe. A leaky camera is a like matter. Put a plate or film in position, withdraw the slide, and, without opening the lens, allow the camera to stand in a bright light for a few minutes. If, on developing the plate or film in either darkness or in a perfectly safe light, fog or streaks are apparent, the camera can be adjudged as unsafe.

I trust that I have made it clear that there is no luck or chance about the matter. Learning how to make a perfect negative from which can be made a perfect print, learning how to do it every time, is simply a matter of playing the game according to the rules. If failure comes, some rule has been violated, some factor has been wrong. If a major portion of the factors are known to be right, the question of the wrong one is narrowed down to where it can be determined by a test or two. But, on the other hand, going at it in a slap-dash manner, not knowing that any factor has been rightly determined, failure results in mystery; a series of experiments may bring forth success, but not success with understanding. The worker will know no more than he did before. Not knowing what caused the original failure, being unable to locate its cause, he is still at sea. How much better it would be to take up one factor at a time, master it completely, then on to the next, and so on. How quickly one would arrive at the point where failure was the exception, only caused by some slip or mistake at once recognized. Each point mastered would make the remaining ones more easy and the rate of progress would increase accordingly. The worker would find new interest and his productions would show constant improvement. Does not this look the better way? I believe it does.

SOFT BROMIDE PRINTS

A New York reader wants to know how he can get other than soot-and-whitewash bromide prints from a certain negative that is inclined to print too hard. Dissolve one drachm of potassium bichromate in ten drachms of water. Add one drachm of this solution to ten drachms of water, and therein immerse the exposed print for one minute. Then wash for another minute and apply a normal developer. The exposure should be about three or four times normal.

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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

SPEED OF STANDARD SHUTTERS

Great Britain has a National Physical Laboratory where all types of apparatus receive examination and report. In a paper (vide *British Journal of Photography*) recently read before the Optical Society, Mr. T. Smith gives an interesting resume of the method and results of shutter testing as carried out at this institution. After describing the method used, the writer says:

"The results to be given refer to focal-plane and to between-lens shutters.

"Before considering the results of the tests it is necessary to realize precisely what is meant by the terms 'speed' and 'efficiency' as applied to these two types of shutters. It is convenient to denote by the 'speed' of a particular shutter the length of an exposure defined in such a way as to depend solely upon the shutter; in particular it should be independent of the aperture of the lens used. It may not in all cases be possible to do this, but it is possible in the case of focal-plane shutters and of between-lens shutters which open and close at the center. It happens, however, that if we adopt definitions of the 'speed' which are independent of the aperture, by the speed of a between-lens shutter, we mean something very different from what must be understood by the same term when applied to a focal-plane shutter. We define the speed of a between-lens shutter of the type considered to be the interval of time between the instant when light first passes the shutter leaves and the instant when all light is cut off; in other words, by speed in this connection we mean the total duration of exposure at the center of the plate. From a practical point of view, speed in this case is an indication of the rate at which an object may be moving without risk of producing an appreciable blurring of its image.

"In the case of the focal-plane shutter, the speed is defined as the interval of time taken by the opening between the blinds to cross the axis of the lens. This is a measure of the amount of light that will reach the center of the plate during the exposure, i. e., it indicates whether the plate will or will not be properly exposed; whatever the type of shutter, such a measure of exposure is called the 'equivalent exposure.' We may define this as follows:

"The equivalent exposure is the length of time required to transmit to the plate an amount of light equal to that received during the actual exposure, when throughout this (equivalent) exposure we suppose that every part of the lens is effective which is effective at any instant of the actual exposure.

"The exposures in all shutters are connected with the efficiency by the equation:

"Equivalent exposure=Total duration of exposure×efficiency.

"From this it is evident that the 'speeds' of focal-plane and of between-lens shutters are not directly comparable. A case which may easily arise is one in which a focal-plane shutter and a between-lens shutter for a particular lens aperture have an efficiency of .5; the 'speed' of the focal-plane shutter may be .001 sec., and of the between-lens shutter may be .002 sec. Under these circumstances the two shutters are equivalent to one another; in each case the length of time during which light reaches the center of the plate would be .002 sec., and the equivalent exposure would be .001 sec. This distinction must be borne in mind when considering the results of some of the tests.

"The particulars which I now propose to give indicate in each type of shutter the highest speeds attained; the range of speeds, the general accuracy of the marked speeds, and the efficiency. This is followed by a short discussion of the factors that affect the efficiency, and some diagrams will be given illustrating a few cases of particular interest.

"In ten typical focal-plane shutters, of which only two were made to the same design, of the highest speeds obtained from the individual shutters, the highest was .0005 sec-

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onds, and the lowest .006; the mean of all the highest speeds was .0025 seconds, four of the ten having their highest speeds lower than this. Only two shutters attained as high a speed as .001 seconds.

"In the best case the highest speed was within three per cent of its nominal value; in the worst case it was three times as long as it should have been—an error of 200 per cent—taking the marked speed as the basis of measurement.

"The following results are taken from tests on twenty between-lens shutters of sizes suitable for use with such modern lenses as are often fitted to half-plate or 4x5 cameras. Large between-lens shutters have been excluded, as their speeds are slow in comparison with those of sizes in general use.

"The highest speed (duration of exposure) reached by any of these shutters was .0023 seconds; the highest speeds attained by all the shutters were between this and .022 seconds; the mean of all the highest speeds was .0054 seconds. In the best case the highest speed was within 0 per cent of its nominal value; in the worst case it was 2.2 times its nominal value. The mean error for all speeds was in the best case 15 per cent, in the worst case 80 per cent, and the mean error for all the shutters was 46 per cent. The longest exposures were between .17 seconds and 2.3 seconds, with a mean value of 1.0 seconds. The ratio of the lowest speed to the highest varied from 7.5 to 1,000, with a mean value of 500.

"In some of these cases the efficiency was determined. In the best case, with a highest speed of .005 seconds, the efficiency was 54 per cent; the efficiency with the lowest speed (.84 seconds) was 100 per cent, and the mean value for all speeds (average value .22 seconds) was 89 per cent. The mean results for all efficiency tests were highest (mean .0054 seconds) 50 per cent; lowest (mean 1.0 seconds) 100 per cent; average (mean .22 seconds) 80 per cent.

"The table given above shows some of the results of these tests reduced to a form in which direct comparison is possible. These comparisons are given in three cases: For the fastest shutters of each type; for the most accurately marked shutters of each type; the mean results of the examination of all the shutters. It is possible to attain with a focal-plane shutter a shorter exposure than is reached by any of these between-lens shutters, but the difference is not so great as might have been expected. In the average results there is in this respect nothing to choose between the two types.

"The most remarkable difference shown by this comparison is in the range of exposure obtainable, as measured by the ratio of the longest equivalent exposure to the shortest equivalent exposure. The between-lens shutter is in this respect out of comparison superior to the focal-plane shutter."

COMPARISON OF FOCAL-PLANE AND BETWEEN-LENS SHUTTERS, USING LENS AT F-4.

SHUTTERS GIVING HIGHEST SPEEDS	Focal-Plane	Between-Lens
At highest speed total duration of exposure	.0017	.0013
At highest speed equivalent exposure	.0005	.0011
At highest speed efficiency	.30	.47
Ratio of equivalent exposures—longest/shortest	60.	1,000.
MOST ACCURATELY MARKED SHUTTERS		
At highest speed total duration of exposure	.0024	.005
At highest speed equivalent exposure	.0006	.0027
At highest speed efficiency	.25	.54
At lowest speed total duration of exposure	.072	.84
At lowest speed equivalent exposure	.071	.84
At lowest speed efficiency	.99	1.00
Percentage error of markings	14.	15.
Ratio of equivalent exposures—longest/shortest	120.	300.
MEAN OF RESULTS ON ALL SHUTTERS		
At highest speed total duration of exposure	.005	.0054
At highest speed equivalent exposure	.0025	.0027
At highest speed efficiency	.5	.5
At lowest speed total duration of exposure	.056	1.0
At lowest speed equivalent exposure	.056	1.0
At lowest speed efficiency	1.0	1.0
Percentage error of markings	43.	46.
Ratio of equivalent exposures—longest/shortest	33.	500

A REFLECTION CINEMATOGRAPH

A cinematographic apparatus, in which the transparent film is entirely done away with, marks a new era in animated photography. Fire risk becomes practically eliminated, and this, despite the appearance recently of non-inflammable transparent films, is worthy of

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attention. But the paper band of photographs which takes the place of the ordinary celluloid film is of value from an economical point of view quite apart from the fact that it can be rendered non-inflammable. At first sight one would think that in illuminating the band of photographs from in front, and using the reflected light to form the image, a great loss of light would take place, necessitating a considerable increase in the amount of light used. But the losses in reflection may be compensated for by employing a much larger picture, and in the new apparatus put forward by Captain Fulton the pictures are about four inches by three in size, the paper band being, roughly, four inches in width. The general outline of the apparatus is as follows: Two arc lamps, one each side of the moving paper band, cast a powerful illumination, by means of condensers, upon the photographs. The objective occupies its ordinary position and projects the image on the screen. The large area of illumination means a less amount of heat on the pictures, and, owing both to this and to the impervious character of the treated paper, it is possible to stop short on one picture for an indefinite time. When showing a written letter or notice with a celluloid film it is usual to run the band continuously, whereas in this instance one merely stops the apparatus, showing the one "unit"—the written matter—until the audience has had time to read it.—*Amateur Photography.*

THE ACID BICHROMATE BLEACHING BATH

The advantages of the bichromate bleacher, writes L. P. T. in *Photography and Focus,* are that it is very cheap, easily made up, easily used, and gives a very fine deep color, as far as bromide prints and enlargements are concerned. It is best kept as a ten per cent solution of potassium bichromate, which, at ordinary temperatures, is a saturated solution. If the bottle is shaken up from time to time, and there are always some undissolved crystals at the bottom, it may be assumed that it contains a ten per cent solution.

To make up the bleaching bath I take as many drams of this ten per cent solution as I want ounces of bath, and dilute with water to make the required quantity. For every ounce of this dilute solution ten minims of hydrochloric acid are added, and the bath is ready for use. Whatever bleacher may be used, there is no doubt that it is very important to get rid of the last traces of hypo from the print before it is applied, as, if this is not done, the print will be reduced. In my own case, I always place the print, or rather the enlargement, for it is only enlargements that I tone, in a dish of water which has been given a decidedly pink color by the addition of a few drops of a solution of potassium permanganate, and leave it lying there for a few minutes. If, at the end of that time, the solution still has its pink color, there is no fear of any hypo being present; if the pink color has been discharged, the hypo was not removed, and the print should be washed and tested again.

The action of the bichromate bleacher is a fairly rapid one, but it should be allowed to continue for two or three times as long as it takes to bleach the print visibly. The bichromate stain must then be washed out, which will require some half dozen changes of water, spread over half an hour or so. I give several rapid changes, and then leave the enlargement to soak for a little time, repeating the soaking if there is any yellowness left. Nothing then remains to be done but to darken the print with the usual sodium sulphide solution or with ammonium sulphide. Thirty minims of this to half a pint of water makes a solution which acts rapidly and effectively, giving a fine, rich, brown-black color. The print is then washed in half a dozen changes of water.

Note: I have tested this method pretty carefully, and it certainly gives fine tones. The print is very decidedly intensified as well as toned. The degree of intensification can be largely controlled by the amount of acid used, the less acid the greater the intensification. The only disadvantage in the method is necessity for complete and therefore prolonged washing. I prefer the ammonium sulphide to the usually used sodium salt. There is less chance of decomposition and yellow tones.—H. D'A. P.

PERMANENCE OF PHOTOGRAPHIC PRINTS

Harold Baker, writing on this subject in *Photography,* says: "The question sometimes arises: Are *any* photographic prints permanent? The answer, of course, is that some are, some are doubtful, and some undoubtedly not.

"Now, what prints are permanent? First,

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I should place keramic photographs, prepared by the 'dusting on' process, burnt into an enamel surface, and glazed by further firing. I believe these are absolutely as permanent as can be desired. Carbon prints, oil and bromoil, provided the pigments used are stable and the paper of good quality, come next. We are told that in less than fifty years most of our new books will have crumbled to dust, especially those printed on 'art paper.' Photographs, however, should have a longer life, as the paper must be pure. Next in order of permanence I should put toned bromides, followed by untoned bromides, and next platinum prints."

He goes on to state that, notwithstanding the theoretical permanence of platinums, in practice they are the reverse. Speaking of mounting, Mr. Baker concludes:

"The methods used for mounting undoubtedly have a great influence on the permanence of photographs. For the wet method, pure starch freshly prepared each day is the best. Ordinary flour paste should never be used, as it is so liable to become acid.

"I had an excellent example of this under my notice only a few days ago. A toned bromide enlargement was sent out, unmounted, and was taken to a frame maker to be framed. He mounted with flour paste, probably not very fresh, and put it upon a piece of common cardboard. In a short time the white background had become stained, in patches, a beautiful sky blue. The patches suggested that where the paste was thickest the acidity had acted upon the traces of potassium ferricyanide remaining in the paper, and produced Prussian blue. There may also have been some chemical in the cardboard which had assisted the chemical reaction; possibly some form of iron.

"The moral of this is always to use the dry mounting process, for several reasons. First, because an impermeable film is placed between the print and any impurities in the mount; and, secondly, because there is no moisture in the mountant to assist chemical action between injurious substances in the mount and the print. There is an old saying that chemical action will only take place when water is present; and, although it is not strictly accurate, there is a great deal of truth in the idea. If a dry print is kept on a dry mount which contains injurious chemicals, the danger of damage to the print is fairly remote; but as soon as dampness comes on the scene, the chances of injury are very great.

"Another moral to be learnt from this incident is the difficulty of removing potassium ferricyanide from a print, as many a bromoil worker knows to his sorrow; for after a print has been bleached, washed, passed through the acid bath, washed, fixed, and washed again, there will still remain sufficient ferricyanide to produce blue stains if a particle of iron falls on the wet print."

A BROMOIL BLEACHER THAT DISPENSES WITH THE ACID BATH

The hold that the Bromoil process has now secured upon artistic workers, writes A. B. W. in the *Amateur Photographer*, demonstrates that it is both expeditious in method and satisfying in results. The fact that all Bromoil prints are not successes is merely incidental to the individual shortcomings of the producer, and in no way a fault of the process. The following method of preparing a bromide print for pigmenting is at once rapid and certain. It has the added advantage of dispensing with the acid bath, which is regarded by some as a drawback to the ease of the procedure, as originally recommended. Make up the following solutions:

1: Copper sulphate, 1 ounce in 10 of water.

2: Potassium bromide, 1 ounce in 10 of water.

3: Potassium bichromate, 1 ounce in 10 of water.

Of these three ten per cent solutions, take two ounces of No. 1, one ounce of No. 2, one ounce of No. 3, add water to make up to ten ounces, and the Bromoil bleacher is ready for use.

It should be used at a temperature of 65 degrees Fahrenheit. When the print is well bleached, wash in water at a temperature of at least 65 degrees. A higher temperature, 70 to 80 degrees, will give greater relief, but may tend to soften the gelatine. If this occurs, add two ounces of a ten per cent solution of alum to the above formula.

After washing, fix in an ordinary acid fixing bath, made as follows: Hypo, three ounces; metabisulphite of potash, one-half ounce; water, twenty ounces, for five minutes. Wash in a couple or three changes of water, and the print is ready for pigmenting as usual.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

OUR NEW YORK ALBUM DIRECTOR

Louis R. Murray, 233 Ford Street, Ogdensburg, New York, our New York Album Director, asks that any member who has written him during the past several months without receiving a reply will kindly advise him and he will at once "make good," either by replying or by sending prints, as the case may be. He has been very busy the past summer and unable to give I. P. A. matters the attention he would like. He wishes prints from all the New York members and will have gotten out an album before this reaches the readers. Any member in his State who may wish to see the album before contributing prints can do so, in most cases, by writing and promising to send it on promptly to the next on the list. Mr. Murray can generally route an album to oblige such a member if asked to do so.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4948 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 1160 Detroit St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NEW MEMBERS.

3060—Walter M. Dinnel, Lock Box 116, Ortonville, Minn.
Post cards, various papers, of scenery; for the same. Post cards only. Class 1.

3061—W. R. Prentzel, Box 393, Hillsboro, Oregon.
3¼x5½, developing paper, of Tualitin Valley scenery and trees; for marines, landscapes, animals or birds, mountain scenery, and aboriginals. Post cards only. Class 1.

3062—H. S. Conger, Ogilvie, Minn.
3¼x5½, developing papers, of landscapes, home portraits, and architectural subjects; for landscapes. Mostly post cards. Class 1.

3063—Herbert H. Raymond, Independence, Colo. Class 2.

3064—Edwin F. Robac, R. F. D. No. 3, Box 111G, South Tampa, Fla.
3¼x4¼, post cards, 4x5, and 5x7, developing papers, of portraits. landscapes, cloud effects, and a few speed photos, as races, trains, etc.; for general views of the country, no portraits, or any trash. Good work for good work only. Post cards and stereo views. Class 1.

3065X—R. J. Clark, 16 Linden Ave., Warren, Ohio.
Post cards only, developing paper, of landscapes, and street scenes; for views of interest that cover face of post card. Class 1.

3066—Cloe K. Ferris, Box 215, Oak Harbor, Wash.
5x7 and post cards, developing papers, of scenes and views; for the same. Post cards only. Class 1.

3067—Newman M. Smith, 1053 Hudson Ave., Detroit, Mich. Class 2.

3068—Gene Yarick, Berlin Heights, Ohio.
Post cards, developing and printing-out papers, of views and marines; for the same. Post cards only. Class 1.

3069—Ernest Geach, R. F. D. No. 2, Grass Valley, Cal. Class 2.

3070—Lawrence H. Niendorf, Colon, Mich.
Class 3.

3071—C. L. Hodges, Box 108, Vanderbilt, Mich.
Post cards only. Class 1.

3072—Henry L. Feltes, Arcadia, Wis.
Up to 8x10 developing paper; prefer mostly outdoor views, good work; please reply; promise good work in exchange. Prints and post cards. Class 1.

3073—Dr. W. P. Bush, Acheson Bldg., Berkeley, Cal. Class 2.

3074—O. R. Johnson, Vale, Ore.
Post cards and 5x7, developing paper, of views and animal studies. Class 1.

3075—W. H. Stannard, 1304 L St. N. W., Washington, D. C.
4x5, developing paper, of nature scenes and landscapes, also views about Washington; for nature scenes, landscapes and city scenes, to a small extent. Class 1.

3076—W. A. Hibbs, M. D., Cobb Bldg., Seattle, Wash.
3¼x5½, developing paper, of local views, mountains, trains, Puget Sound and Cascade Mountains; for historical, public buildings and prominent places. Prints and post cards. Class 1.

3077—E. A. Scharmen, Route 1, Box 109, Traverse City, Mich.
Up to 5x7, various papers, of orchard scenes and all kinds of outdoor work; for mostly landscapes. Class 1.

3078—Ralph H. Shafer, 404 W. Jackson St., Elkhart, Ind. Class 2.

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3079—Frank U. Smith, Box 101, Port Townsend, Wash.
3¼x5½, various papers, of mountain and wild game pictures, also hunting scenes; for the same. Post cards or prints. Class 1.

3080—August Ballmann, 918 Morrison Ave., St. Louis, Mo.
8x10, various papers, of portraits and city street scenes; for full length portraits of men and young ladies, three-quarter figure. Class 1.

3081—Jay P. Bicknell, Krumman Bldg., Sioux City, Iowa. Class 2.

3082—Charles O. Christiani, Prineville, Ore.
5x7, developing paper, of mountain scenery, architectural views, fields, farms and animals, also groups; for the same. Post cards first and second prints 5x7. Class 1.

3083—E. Millard, 18 Fountain St., Carnegie, Pa. Class 2.

3084—John A. Schreurs, 807 Lincoln Ave., Highland Park, Ill. Class 3.

3085—Thos. Bradt, R. R. No. 4, Aylmer (West), Ontario, Canada.
4x5, developing paper, of farm buildings, country scenes, Niagara Falls and general views; for interesting subjects from any country except United States and Canada. Class 1.

3086—Brown F. Atkin, Post Hospital, Fort Riley, Kansas.
Post cards and quarter plate, developing paper, of Philippine snapshots; for art studies, nudes and semi-nudes. Class 1.

3087—R. H. Beil, 239 Elm St., Clinton, Iowa.
U'p to 8x10, developing paper, of groups, views, interiors, babies, lantern slides and commercial; for any kind, just so it is good work. Class 1.

3088—G. E. Livermore, Box 156, Comstock, Neb. Class 2.

3089—Tina F. Benedict, Anatone, Wash.
Class 2.

3090—Monroe V. Curtis, Box 558, Freeport, Maine.
4x5, developing paper, of landscapes and shore views; for the same. Post cards only. Class 1.

3091—J. S. Kneifel, Columbus, Neb.
4x5, developing paper, of railroad and landscape scenes; for post cards. Class 1.

3092—Henry J. Brook, B. A., Box 13, Warren, N. S. W., Australia. Class 2.

3093—J. J. Botnen, Abercrombie, N. D.
Class 3.

3094—E. B. Crosswait, Lake City, Iowa.
Post cards, various papers, of street, snow and various scenery; for anything of interest. Class 1.

3095—Geo. H. Podmore, Box 48, Withrow, Wash. Class 2.

3096—David Gibb, 209 W. Vine St., Mount Vernon, Ohio.
3¼x5½ to 6½x8½, developing papers, of designs in granite monuments and views around Ohio; for anything interesting. Class 1.

3097—F. J. Kopp, 717 So. Washington St., Hobart, Okla.
5x7, deevloping paper, of Indian subjects, cotton scenes and general views; for good general landscape and view work of interest. Post cards also. Class 1.

RENEWALS.

427—William Service, Box 422, Silverton, Ore. Class 2.

638—George Timmins, 1410 E. Genesee St., Syracuse, N. Y. Class 2.

1039—Harrie A. Holmes, Greenland, N. H.
4x5, developing paper, of scenery and a few home portraits; for portraits only. Class 1.

2076—H. J. Becker, Lock Box 64, Cascade, Iowa. Class 2.

2087—W. J. Luth, Route 25, Plymouth, Wis.
Post cards and up to 4¼x6½, developing papers; railroad scenes and views of wrecks preferred. Prints and post cards. Class 1.

2122X—W. C. McPhee, Caseville, Mich.
4x5, developing paper, of farm scenery, barn raisings, threshing, etc., also lake shore views; for anything unusual or interesting. Post cards only. Class 1.

2139X—Albert G. Hill, 8 Hobart St., Meriden, Conn.
Post cards, of waterfalls, including Niagara, Ausable chasm, etc.; for waterfalls, animals and marines. Privilege of rejection extended and expected. Good work only. Class 1.

2242—Norton L. Avery, Box 515, Lowell, Mich. Class 2.

2607—John B. Gurley, Box 44, Maltby, Mich.
5x7, and post cards, developing and printing-out papers, of all kinds of farm, logging, hunting and fishing scenes, also landscapes; for anything of interest. Post cards only. Class 1.

2618X—George H. Webb, Columbiana, Ohio.
Post cards of various subjects, road scenes, child studies, etc.; for anything interesting. Privilege of rejecting extended and expected. Good work only. Class 1.

2619X—Frank Smith, R. F. D. No. 1, Oneida, N. Y.
Post cards, developing paper, of scenery, buildings, parades, floats, statuary, farm scenes, etc.; for the same. Class 1.

2936—A. T. Hudelson, 1011 Tennessee St., Louisiana, Mo.
Stereo slides of scenery in Missouri and Minnesota, including Mississippi River scenery and a set of views of Minnehaha Glen and Falls; for natural scenery, studies in forestry, botany, and historic views from all parts of the world, on developing or printing-out paper. Class 1.

2710—G. M. Wolfe, Quinlault, Wash.
Class 2.

2976—David H. L. Wills, 1227 Cambridge St., Philadelphia, Pa.
(In previous notice had name incorrectly spelled Wiles.) Post cards, developing and printing-out papers, of high class speed work taken with 3A Graflex; desire speed work in exchange. Class 1.

CHANGES OF ADDRESS.

897—H. Crosby Ferris, 4332 Wolff St., Denver, Colo. (Was 837 Acoma St.)

1895X—Arthur L. Burgess, 227 N. 20th St., Columbus, Ohio.
(Was 183 Jefferson Ave.)

2380—R. R. Wilson, Box 213, Sturgeon, Pa.
(Was Elmora, Pa.)

2620X—L. E. Whitford, 1033 East 6th St., Fremont, Nebr. (Was Shelton, Nebr.)

2673—Miss Lois Clency, Claremont, Cal.
(Was Escondido, Cal.)

2688—Chas. C. Ferris, Waterloo, N. Y.
(Was Box 693, Syracuse, N. Y.)

2713—A. Harris, Route 1, Box 37A, Reagan, Texas. (Was Fairfax, Okla.)

2736—Mrs. Evelyn Laigilliere Ford, 484 24th St., Odgen, Utah.
(Was Soda Springs, Idaho.)

2762—A. W. Redfern, 85 Ridgewood Ave., Waterbury, Conn.
(Was Nangatuck, Conn.)

2787—Dr. Collins Yerxa, 1204 W. 4th St., Williamsport, Pa.
(Was Lawrenceville, Pa.)

2789—Rev. U. Z. Gilmer, Maquon, Ill.
(Was Roseville, Ill)

2802—George Parke, Box 41, Dutro Station, Memphis, Tenn. (Was 292 Madison Ave.)

2839—J. H. Chinnery, Woodville, Or.
(Was Scottville, Mich.)

2882—Henry C. Addison, 1977 N. 5th St., Kansas City, Kans.
(Was 2005 No. 5th St.)

2925—G. I. Rhodes, Rm. 40, Barnett Bldg., Albuquerque, N. M.
(Was G. S. Rhodes, care Forest Service, Flagstaff, Ariz.)

2961—L. W. Golden, Tehama, Cal.
(Was Wm. Golden, Portola, Cal) Class 2.

2994—Emil A. Johnson, 1030 Townsend St., Chicago, Ill. (Was 1031 Townsend St.)

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

THE MULTI-SPEED SHUTTERS AT BRIDGEPORT

At the Bridgeport Convention the town must have been overrun with cameras fitted with Multi Speed shutters. The Mayor was caught with an expansive smile, the fire department was photographed, visiting photographers and demonstrators were made to jump over their baggage, play dead, and other stunts, in order that Mr. Dietz could show what the Multi Speed shutter could do. Not once did he fail. The Mayor's picture occupied large space in the Bridgeport newspapers, our advertising pages show one of the fire department stunts, and the athletic feats we are too charitable to reproduce—they are really too perfect in detail and sharpness. But the shutter made good beyond a doubt. It would require but a very few such pictures as those made by Mr. Dietz to make a reputation for any photographer. Better look into the matter and get a catalogue if your local dealer does not carry them. Address, Multi Speed Shutter Company, 317-322 East Thirty-fourth Street, New York.

R. E. Apgar, for nearly five years with the Ford Studio at Madison, has purchased the studio which Theodore Brown has conducted at Marshalltown for thirty-one years. He took charge October twenty-first. His experience and skill assure him success in his new location.

PHOTOGRAPHIC SUPPLIES BY MAIL

Attention is called to the new advertisement of the Multiscope & Film Company, of Burlington, Wisconsin, in this issue. The firm issues a very full and complete catalogue, and it is a catalogue that lists a line of cameras and supplies not found in all the other catalogues. They are making a special bid for mail order trade. The firm is an old, reliable one, as can be judged by the popularity of the celebrated Al-Vista camera, one of their productions that is still a good seller. It will pay our readers to investigate their line of supplies. Send for a catalogue before the matter is overlooked.

SOME PRIZE WINNERS

The Defender Photo Supply Company has been conducting a very successful competition among amateur photographers in the State of Minnesota; two hundred and eleven prints, all made on Argo paper, being submitted. The judges were Charles R. Webster, Augustus Buckhecker and E. C. Gutland, all of Rochester. The two former are experienced photographers, while the latter is a competent photographic critic.

Prizes were awarded as follows: First prize, twenty-five dollars, C. R. Weldon, 2301 Bloomington Avenue South, Minneapolis; second prize, fifteen dollars, H. N. Emerson, 2917 Bloomington Avenue, Minneapolis; third prize, ten dollars, Alta P. Wright, 594 Carroll Avenue, St. Paul; fourth to eighth prizes, five dollars each, awarded respectively to Faus P. Silvernale, St. Paul, and C. J. Brindmore, J. A. Flavahan and De Witt Horn, of Minneapolis. The judges further requested that honorable mention be given prints submitted by R. C. Lansing, St. Paul, and Olive P. Taylor and T. M. Broderick, of Minneapolis. While, under the terms of the contest, but eight prizes could be awarded, these three last submitted prints that were so excellent that the contestants who submitted them are to be congratulated, along with the prize-winners. Indeed, a great majority of the prints submitted were of a high order of excellence. Amateur photography in the Twin Cities is occupying a high plane, if these prints may be taken as a criterion.

A CONVENIENCE FOR WOLLENSAK DEALERS AND THEIR CUSTOMERS

On and after September twenty-fifth, each Wollensak lens leaving the factory, mounted in either barrel or shutter, will have attached an envelope containing a complete set of screws for attaching the lens to camera front board.

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This is but one of several small matters which H. Oliver Bodine, manager of their Promotion Department, has under way to make the handling and sale of Wollensak lenses both satisfactory and convenient.

SOME NEW EDITIONS

There is a new edition of the "Photo Beacon Exposure Card" containing a new speed list of American plates and film. The card is too well known to need description by us, further than to say it is very simple and accurate, doing away with all testing of the light and all complicated calculations. The price, as heretofore, is twenty-five cents. There is also a new edition of "How to Make Enlargements," which is No. 4 of the Dark Room Dime Series. It is an excellent little book, obtainable, as is the exposure card, from American Photographic Publishing Company, Boston, Massachusetts.

REPORTED BY WILLIAM WOLFF

Miss E. Polin, of San Luis Obispo, was in the city for a few days the second week of October.

John O. Tucker and wife, of San Jose, are taking a two weeks' trip to Pacific Grove and surrounding points of interest.

W. Metcalf is now the owner of the Harding Studio at Santa Paula.

Billie Smith, formerly of San Francisco, is now with the Kohne Studio, Chicago.

Earl V. Lewis, of Los Angeles, is spending his belated vacation at the beach. He has been too busy this summer to get away earlier.

Frank Aston, of San Luis Obispo, made and sold nineteen thousand post cards of the wreck of the steamer *Santa Rosa.* Frank is certainly a hustler.

H. A. Parker, of Pasadena, has just returned from a trip to Lake Tahoe.

The handsome new gallery and residence of C. O. Tufts, at Auburn, was destroyed by fire September twenty-third.

Sacramento photographers have had an ordinance drawn up to protect the local men from transient photographers. The local men will pay a license fee and transient photographers will be taxed fifty dollars. Action will be taken this week.

A DICKENSIAN MISSIONARY TO AMERICA

Realizing that lovers of Dickens are numerous in America, and that some of the American branches already are amongst the most active, the committee of the Dickens Fellowship has decided upon a great effort to extend its scope in America in connection with the Centenary festival. The desire is that branches shall be formed in anticipation of the actual Centenary, February seventh next, and that their first corporate work shall be to manage or to assist any committee that may be formed for arranging some sort of Centenary celebration.

The Special Commissioner.—H. Snowden Ward is one of the founders of the Fellowship, is one of its Vice-Presidents, was a member of its Council for several years, and Chairman of the Council in 1907-1908. He acted as Honorary Secretary to the National Dickens Library Fund, which purchased and placed in the Library of the Guildhall, London, what is probably the most complete collection of Dickensiana in existence. Mr. Ward is author of "The Real Dickens Land" (Philadelphia; Lippincotts), and is not unknown in America, where he attended certain conferences of the World's Fair in Chicago, 1893, as a British delegate, and since then has made many visits to the country, including lecture tours in the Eastern States and Canada. He married Miss Catharine Weed Barnes, of Albany, N. Y., daughter of the Hon. William Barnes, and granddaughter of the late Hon. Thurlow Weed, who will accompany him on his six months' tour this winter.

Anyone who wishes to take part in the formation of a branch, or who would be willing to join one if formed in his neighborhood, should write to H. Snowden Ward, The National Arts Club, New York; or if after the present season to the Committee of Management, The Dickens' Fellowship, Craven Street, London W. C., England.

So far as his lecture engagements allow, the Special Commissioner will be prepared to visit any place where a sufficient number of people are wishful to form a branch, will confer with the organizers and will address drawing room or other meetings. His outline arrangements are New York, New Jersey, Pennsylvania, etc., November ten to eighteen, December four to January twenty; New England November twenty to December two; January twenty-two to February ten; Northern New York, Toronto, etc., February twelve to seventeen; Indiana, Michigan, Illinois, etc., February nineteen to

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March two; Chicago to Pacific Coast and back, March four to April twenty.

THE WONDERFUL LITTLE "ENSIGNETTE" CAMERA

Look up the advertisement of the "Ensignette" camera on another page. When closed, and it closes with hardly more than a touch, it measures only 1⅞ x 2⅞ inches and it is only three-quarters of an inch in thickness. It is daylight loading, making little gems of negatives, 1¼ x 2¼ in size, negatives that will stand a remarkable amount of enlarging. It is new in size, shape and construction, being on an entirely new plan that is as simple as it is effective. It is made of metal throughout, opens smoothly and instantly to fixed focus, is self-containing and, all in all, it is an ideal little instrument. It is fitted with a self-contained, brilliant view finder, a winding key and little red window for changing the film after each exposure. The system of film changing and daylight loading is extremely simple, requiring no study or previous knowledge. It comes in a soft leather case, and, combined with its neat appearance and small size, its low price and high quality make its great popularity easily understood. Take a small visiting card, stack up enough of them to make the given thickness, and then imagine a perfect little camera of that size. No matter how many other cameras you have you should have an "Ensignette" to complete your equipment. If your dealer has not yet got them in stock, write G. Gennert, 24-26 East Thirteenth Street, New York, or 212-216 North State Street, Chicago, Illinois.

A VALUABLE LITTLE BOOK

We have never seen so much photographic information, information of a vital and important character, crowded into the same space as it is in a little book before us. It contains an exposure table much the same as the old Photo Beacon table that became so popular; there is a table giving the neces sary speed for moving objects; a time of development table; explanation of the factorial system, and much valuable information on developing plates, and the kind of plates to use. It is sent free upon request. Write J. L. Lewis, 522 Sixth Avenue, New York, and get a copy before the supply is exhausted. You will thank us for giving you the pointer.

A MOST COMPLETE CATALOGUE

We have just received from F. L. Wright, the popular dealer of Racine, Wisconsin, a copy of his new 1911-1912 catalogue. It is quite a bulky book and contains illustrations, descriptive matter and prices covering practically every photographic requisite. It should prove of great value as a reference book, containing, as it does, over three hundred pages. A charge of twenty-five cents is made to partially cover the cost, but as each copy contains a slip good for that amount on the first order, the book costs practically nothing. Any photographer who gets the catalogue and is not inspired with a desire to order some of the goods listed therein is hardly a photographer. Send twenty-five cents and ask that a copy be sent you. Address, F. L. Wright, Photo Supplies, 819 Park Avenue, Racine, Wisconsin.

THE INGENTO TABLETS

After two years of constant study, experimenting and actual tests, Burke & James have completed a full line of photographic tablets. In the manufacture of these tablets they have overcome all of the difficulties in photographic tablet making. They have discovered methods of compressing the pure chemicals without the addition of insoluble and other superfluous ingredients which are generally employed in tablet making. They have also perfected methods of compressing tablets in such a manner that they retain their readily soluble qualities, thus overcoming the one difficulty which has heretofore made the photographic tablet undesirable: They now have a line of photographic preparations in tablet form that is ideal for convenience and efficiency. These tablets are winning the full appreciation of the professional, amateur and dealer in photographic supplies. They will do much to standardize developing chemicals as regards quantity and quality, insuring that better and more uniform work will be turned out. We have had the pleasure of giving the M-Q tablets and also the Intensine tablets a careful test and found them most excellent. They are surprisingly efficient, cleanly and handy, and the economy of them, even disregarding the ordinary waste through spoiled solutions, is most gratifying.

ILLINOIS COLLEGE OF PHOTOGRAPHY

The operating rooms in Rembrandt Hall are being refinished throughout in a dark

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shade of olive green. Ceiling and walls are being finished in panels that can be used in place of backgrounds when desired.

The Blodgett Photo Machine Company has just installed a printing machine in the college and it is quite popular with the students.

Herman Schnabelius has returned to resume his course in photography after being absent the past summer. Fred Tierney, student of 1908, made the college a visit last month.

The College Camera Club held its regular election last month and elected the following officers: Vern Sabin, president; George Marrison, vice-president; F. C. Miller, secretary, and T. Munson, treasurer. The club has just installed a Shoberg portable skylight and it is proving a great success.

BISSELL COLLEGE OF PHOTO ENGRAVING

Carl Firey, artist and illustrator for the Orange Judd publications, is taking a course in engraving at the college and at the same time furnishing the required quota of drawings to his papers. Many of the drawings he engraves himself and sends in the finished cut instead of the drawing. His contract includes the *Orange Judd Farmer, American Agriculturalist, New England Homestead, Northwest Farmstead, Farm and Home* and *Dakota Farmer.*

Messrs. Howlett and Earl, who have spent the summer at their homes, have resumed their course in the engraving college. Angel D. Rodriguez, who has taken a course in engraving and three-color work at the college, has left for his home in Panama, where he will take charge of the engraving department of the *Panadiario,* the leading Spanish-English paper in that country.

NEW WOLLENSAK SOFT FOCUS LENS

The newest addition to the Wollensak family of lenses, the Verito, diffused focus, f-5, seems to be filling a want long felt by both the amateur and professional, reports received by the Wollensak Company from those who have been using the Verito being very flattering indeed.

The Verito is a double lens, built on an entirely new formula, giving beautiful soft negatives, free from ghosts and flare, and distinctly different from those made with other types of soft focus lens. It proved, as lenses were concerned, quite a hit at both the National Convention at St. Paul and the Bridgeport Convention; orders being received from such well-known professionals as Harris & Ewing, W. H. Towles, Ben Larrimer, J. H. Garo, Elias Goldensky and others.

The Verito is equally suitable for landscape work; it is rectilinear, therefore rendering them without distortion, with an absolutely equal diffusion over the entire plate. A number of the best-known pictorial landscape photographers have placed orders for one, and no doubt the majority of the leading workers will become owners before the end of this year. On account of the demand it has been impossible for the makers to fill all orders promptly, but they advise us that they are now prepared to ship promptly upon receipt of order. The lens will be found specially adapted to winter landscape work, and we would urge our readers who are interested in pictorial work of any description to address the Wollensak Optical Company, Rochester, New York, and ask for descriptive matter pertaining to this new lens.

CALIFORNIA CAMERA CLUB

The California Camera Club has increased its membership considerably and is instructing its new members in various branches of photography. C. A. Gwynn is instructing classes in portraiture. Dr. H. D'Arcy Power recently demonstrated his method of making bromides in two tints; Dr. Thomas Fletcher is taking a class through various stages of bromide work, and George H. Preddey is instructing another class in general bromide enlarging.

The monthly outings of the club have proven very successful. The trip on the Ocean Shore Railroad, with beach dinner, was attended by over sixty, and on October first the bay excursion on Captain Leale's steamer *Caroline* was attended by over one hundred and forty. Many fine pictures were secured and it is the intention of the club to continue these outings as often as possible.

The entertainment at the club rooms in September attracted an attendance of about ninety. The talent, dramatic and musical, was first class. Dancing and refreshments helped to make the event very enjoyable.

The Lantern Committee has nearly completed the slides for its Interchange set.

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Extreme Simplicity
Carbon Quality

Aristo Gold Paper and Post Cards

Print by daylight—wash and fix. The toning chemicals are in the paper.

American Aristotype Division,
EASTMAN KODAK CO.
JAMESTOWN, N. Y.

All Dealers.

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PRINTS BY GASLIGHT

You will not know how good your negatives are until you have printed them on

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Ask for the Velox Booklet.

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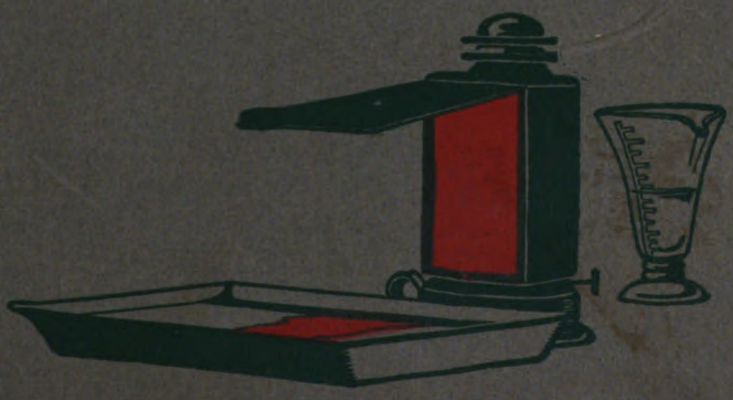
Vol. XVIII No. 12 DECEMBER, 1911 Price, 10 C

Camera Craft



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SAN FRANCISCO, CALIFORNIA

An Actual Experience

A FEW days ago I dropped into the photographic department of the greatest news agency in the world.

Believe me, the fellow who showed me around was very courteous, but one of the keenest buyers I have met, only he took me for a visiting photographer. He was proud to show me his well appointed stock room full of

Cyko Paper

"You just told me your department was compelled to buy the lowest priced goods obtainable," I remarked, "yet you are using CYKO." "Yes," he answered, "I have tried all the papers on the market and CYKO is the lowest priced. Every sheet means a good print—no waste, no loss of time. Rejected prints and lost time are worth money to us."

This fellow could tell CYKO in the dark by sensing, and he proved it to me!

A. H. Gamontter
Secretary.

Ansco Company, Binghamton, N. Y.

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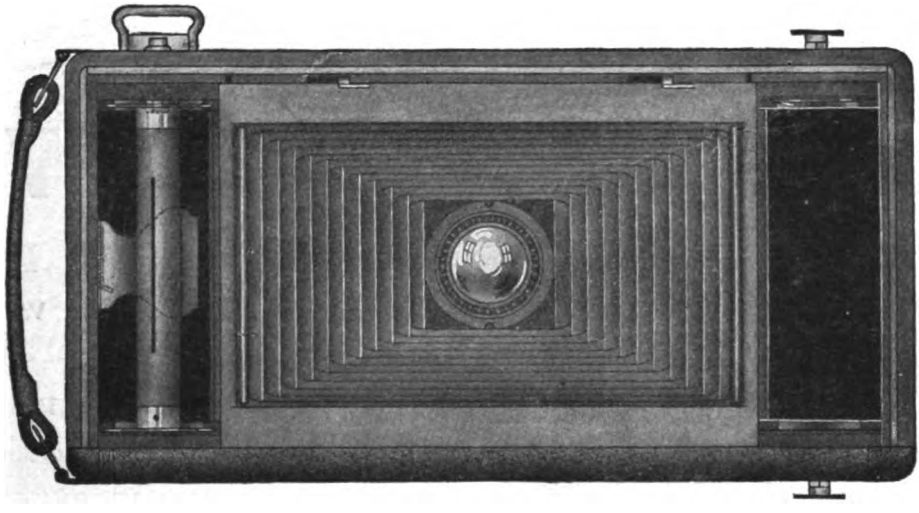
This is only the Back View of Ansco Camera

Very important indeed as you will learn



by the handsome Ansco catalogue sent to those interested

"Now"

Back of your lens should be

ANSCO FILM

to help your results with its chromatic balance, non halation qualities and speed.

Ansco Company

Binghamton, N. Y.

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VULCAN PLATE NEGATIVE PRINT ON ARGO PAPER

WINTER PHOTOGRAPHY

Make your negatives on plates or film that give assured results On dark, cloudy days, or bright, sunny days

VULCAN

Film or Plates will produce negatives which will yield Best Prints. Both the Plate and the Film have sufficient speed and latitude to correct the errors in exposure which will frequently occur on a winter's day.

Vulcan Plates are giving satisfaction to a multitude of photographers in both outdoor and studio work. They can be relied on to make the best negatives for you.

Vulcan Film is the most recent of Defender successes. It is unexcelled by any other roll film—bar none. We believe it will give you better satisfaction than the film you have been using. Get a roll, and determine for yourself.

Write us today, asking where Vulcan Film may be purchased in your neighborhood. Also ask for a copy of the Defender Tipster—free.

Defender Photo Supply Company

ARGO PARK **ROCHESTER, N. Y.**

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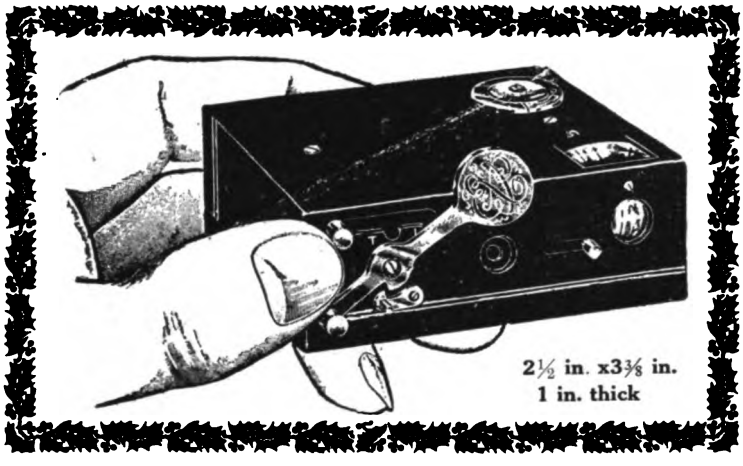
THE IDEAL
CHRISTMAS GIFT



AN

EXPO POLICE CAMERA

In every respect just as good as a larger camera and in some respects superior. Real vest pocket size, 2½" x 3⅜" x 1" thick. Pictures 1" x 1½". Extraordinary quality universal Focus Lens. Daylight loading and unloading. Price, with genuine leather Carrying Case, **$5.00,** postpaid. Roll of 12 films, 25 cents.

SOMETHING NEW!

ARTISTIC RESULTS WITH

FIRELITE
SOLUTION

Produces a rich red glow identical to that which comes from the flames of an open fire place. Manipulation simple. Absolutely permanent.

8 Oz. Bottle, 50 Cents

SUNSET PHOTO SUPPLY CO.

895 MARKET STREET

SAN FRANCISCO **CALIFORNIA**

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FACTS!

Concerning 1912 Model of the Spaulding Automatic Post Card Printing Machine

Automatically feeds, prints and counts post cards. Prints from 8x10 or smaller negatives, exposing any part of plate or film in any position. The printing portion of plate readily changed and adjusted to meet every possible requirement.

Automatically stops and notifies operator when desired number of cards have been printed. Machine stops if light goes out for any reason, thus avoiding blank cards and waste.

Printer free to do other work while machine is running.

Negative as quickly adjusted as when using an ordinary printing frame.

Prints cards with a vignette, narrow white margin, any form of mat, or full surface of card.

Has a perfect timing device allowing range of exposure suitable for all negatives.

Positively no friction marks, and above all no marring or scratching of the negative.

Operated by an electric motor receiving current from any convenient lamp socket.

Only requires 3x4 feet of floor space and costs 24 cents per day of 8 hours to operate, with current at 9 cents per kilowatt hour.

Machine can be run outside of darkroom if desired by using an extra magazine which can be provided for this purpose.

Prints three to four thousand post cards per hour from a negative of average density.

The construction is simple and durable; all parts are easily accessible, with positive action throughout. Not a source of worry, but thoroughly reliable. As well built as a first-class sewing machine and simpler to run.

This Automatic Post Card Printing Machine is not an experiment, but a demonstrated practical labor saving device, designed to fill a long felt want; one that accomplishes more than is claimed for it, as has been proven by several years use in our own plant.

Machine shipped complete, ready to operate by inserting plug in lamp socket, including motor and lamp.

Your correspondence is solicited.

The Arthur J. Spaulding Company

625-633 Eddy Street **San Francisco, Cal.**

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Do You Want to be Perfect in Photography?

HOW

You long to master photography in its finer details—you desire to make perfect prints from each exposure—you have a burning desire to come in close touch with successful methods.

Think of those times you have looked at a beautiful landscape—when you have yearned for a friend to show you how to reproduce it.

Our SYSTEM of photographic instruction will appeal to you. Each subscriber receives personal advice and criticism of prints free of all cost for one whole year.

Realizing as you do that there are simple ways to produce the prints you are intent to make, do you think a mere postage stamp should stand between you and this knowledge?

POSITIVE RESULTS---"I can now put on paper what the eye sees." **R. Kilroy. No. Abington, Mass.**

EVERY TIME---"The result was 12 perfect negatives from 12 plates." **A. B. Hargett, 1904 N. Fulton Avenue, Baltimore, Md.**

MAKES CASH---"I have made over $200 just on how to copy pictures. **A. B. Vank, St. Cloud, Minn.**

CONFIDENCE---"Gives confidence to tackle the most difficult things." **Lester Spahr, Wilmington, Ohio.**

SUCCESS---"A positive doubt remover. By its aid an earnest worker should know no failure." **S. F. VonEhren, 49 Morgan Blvd., New Orleans La.**

C.C. Dec.

American Photo Textbook Co., Scranton, Pa.

CUT OFF AND MAIL NOW

Please send without cost to me, full information regarding your SYSTEM of Photographic Instruction.

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- ☐ *I am a Professional.*
- ☐ *I desire to be a Professional.*

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Address .....

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3501 Adams Ave., SCRANTON, PA.

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A Standard Want Ad Now and Then Is Beneficial to the Best of Men.

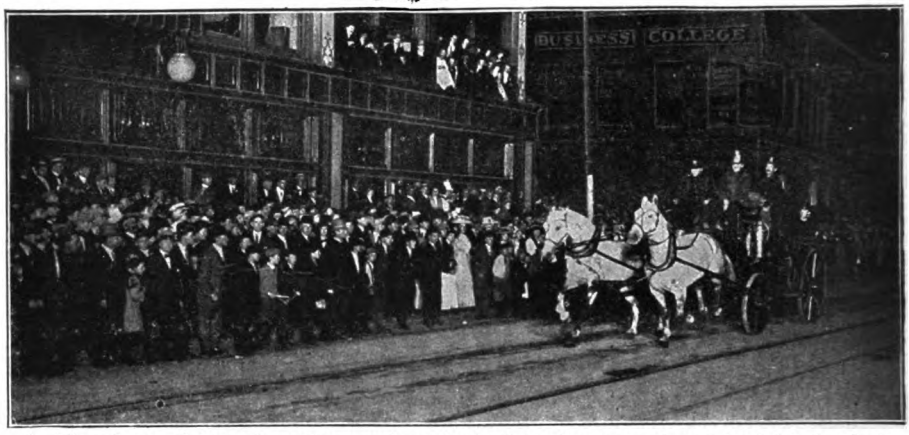
The Bridgeport Standard.

LAST EDITION

Standard Answers Point the Way to Success. See Classified Page

BRIDGEPORT, CONN., FRIDAY EVENING, SEPTEMBER 15, 1911.

NO. 5 HOSE WAGON CAUGHT ON THE JUMP BY SPEED FLASHLIGHT



The above picture shows the No. 5 hose wagon in action, dashing south past the Stratfield hotel. The photograph was taken last night by Gustav Dietz by flashlight and Multi Speed shutter, and is considered a remarkable example of speed photograph in the open air at night. The crowd along the sidewalk and in the windows of the Stratfield are plainly shown and the horses, caught with hoofs in air, are remarkably brilliant.

The rear of the hose wagon is rather lost in the darkness but that is due to the fact that Mr. Dietz did not know until five minutes before the exhibition run that the apparatus was to proceed southerly, he being under the impression that the run was to be from State street to Congress street and had his flash troughs and cameras set facing south.

The photograph shows what can be done with a practically simultaneous flash and exposure, by the Multi Speed shutter, a new fast between-the-lens shutter, for which remarkable claims are made and which has been thoroughly demonstrated during the photographers' convention and attracted much attention.

First of Its Kind.

As it is the picture secured, which The Standard reproduces tonight, is the first instance of its kind in the world. Flashlights with speed shutters have been taken at night before but never has an open air flashlight of fire apparatus on the run been so caught. The success attained was due to the practically simultaneous working of the flash and Multi Speed shutter.

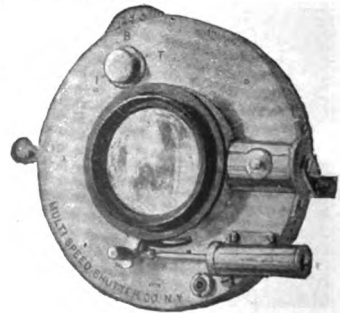
Mr. Dietz is to be congratulated that he secured even so excellent a photograph under the circumstances. The photograph is copyrighted and is printed by The Standard by permission.

THIS IS THE SHUTTER

Will stop anything with higher efficiency, speed and definition than any other photographic shutter.

Mechanically perfect, and simple of operation.

Let us send you a Multi-Speed Shutter on ten day free trial and be convinced of its superiority.



MULTI-SPEED SHUTTER CO.

317-323 East 34th Street : : : New York

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Camera Exchange

I buy, sell or exchange
all kinds of

Photographic Apparatus

Something you want for something you don't want

DEVELOPING AND PRINTING
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W. F. Lynch 242 Market Street
San Francisco, Cal.

FORMERLY WITH T. P. ANDREWS

EASY —— SIMPLE —— PROFITABLE

A New Process

for transferring developing or bromide paper prints to silk, satin and the like.

HEBERGER
35 Clinton Ave. North
Rochester, N. Y.
Write for particulars.

CAL CALVERT 10 MINUTE POST CARD MAN

LEARN HOW TO
FINISH POST CARDS
IN
TEN MINUTES
BY THE
"Mazeograph Method"

Every detail is fully described and formulas given; no part of the operation is omitted, there is nothing similar to this process. It is copyrighted, and all rights reserved, except by my contract with those purchasing the "Course". My object is to teach [by this "Course"] a method for obtaining good, permanent results in ten minutes—there is no further information. PRICE, $1.00.

C. E. CALVERT
796 Washington Street Portland, Oregon

WRIGHT : Racine, Wis.

Enlargements Post Card Printing Camera Supplies

Why write here and there for price lists, etc., and get the same old thing handed you. Our "ad." is not very large but we are there with the goods when it comes to discounts.

Korona, Seneca and Ansco Cameras at nice discounts.

Enlargements that are right, any size, finished in any paper, smooth, rough or tiger tongue, in white, buff or cream stock

100¤ Cyko post card prints from your negative for $10.00.

Send us 25 cents for our 820 page illustrated catalogue and discount sheet, with credit certificate good with first order.

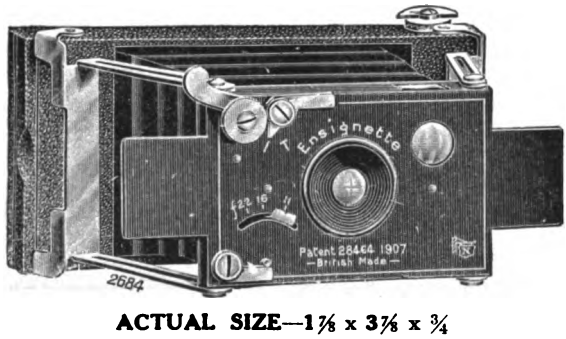
WRIGHT : PHOTO SUPPLIES : RACINE, WIS.

"THE REAL IDEALIZED—THE IDEAL REALIZED"

—IN—

The Wonderful Little ENSIGNETTE Roll Film Camera

VEST POCKET CAMERA



POST CARD PICTURE

ACTUAL SIZE—1⅛ x 3⅛ x ¾

Made entirely of metal, oxidized finish, nickeled trimmings. Uses six exposure film spools and weighs but a few ounces. The Ensignette is a little beauty and right up to the last minute in selling points.

PRICE, $10.00

24-26 EAST 13TH STREET
NEW YORK

G. GENNERT

212-216 N. STATE STREET
CHICAGO, ILL.

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MITCHELL'S
SNAP
10¢
A DEVELOPER
FOR PLATES, FILMS
AND GASLIGHT PAPERS

A SPECIAL DEVELOPER FOR
HAND CAMERA WORK
BUT ALSO
GOOD TO DEVELOP
EVERYTHING

WILL NOT POISON THE FINGERS

Each Package Makes 8-16 Ounces Developer
Price, 10 Cents——By Mail, 13 Cents
Sample sent free upon request
MANUFACTURED ONLY BY
Chas. L. Mitchell, M. D.
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BEST, EASIEST AND CHEAPEST
method of treating prints to
PERMANENTLY PREVENT CURLING
Mailed for 35 cents
Address L. C. BISHOP, 513 Dean Bldg., South Bend, Ind.

NEW POSTCARD PRINTER

A Money-Maker for every Photographer.
Get full particulars.
Bargain List No. 122 now ready. *Greatest ever.*
Send Stamp.
Willoughby & A Square Deal 814 Broadway, New York

ROCK BOTTOM PRICES
Cameras, Lenses and Photographic Supplies
Goods Shipped to Any Part of the United States
SEND FOR BARGAIN LIST
It will pay you to deal with us. Everything for the Amateur and Professional.
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ART PHOTOS
LARGEST COLLECTION
Classic Ruin Scenes
Picturesque Chinatown
San Francisco and Vicinity
LOUIS J. STELLMANN
PHONE FRANKLIN 3666
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RETOUCHING DOPE
The dope that will work on clear glass—that's
RAYMOND'S VELVET MEDIUM
Fastest retouching medium on the market. Takes all the lead required. Does not stick to the pencil. 50 cts. for a two-ounce bottle; $2.00 for a pint bottle. Address
THE RAYMOND CO. (Not Inc.)
2324 W. North Avenue Chicago, Ill.

Lighting in Photography
New and simple method by daylight, and artificial light, both in the Skylight and at home. Illustrated prospectus sent free on demand.
C. KLARY, 103 Avenue de Villiers
Paris, France

Skilled mechanics in all departments insure perfect printing plates.
SUTTER PHOTO ENGRAVING CO.
109 MONTGOMERY ST. SAN FRANCISCO, CAL. PHONE SUTTER 1244
919 SIXTH ST. SACRAMENTO, CAL. PHONE MAIN 898

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Carry Your Light Where You Carry Your Lens

The light is as fully under control as a searchlight, yet as soft as that from a ground-glass skylight.
The machine consumes its own smoke, making no dust, smoke or stench. As cleanly as your camera.
It is automatic in firing, being loaded with twelve cartridges for that number of exposures in rapid succession.
The two small containing cases are as portable as two hand bags. It takes less time to set up than the camera.
The superiority of flashlight in the matter of texture and color values is acknowledged. Coupled with our diffusion it excels.

The Towles-Schofield Co., Inc.

Evans Building **Washington, D. C.**

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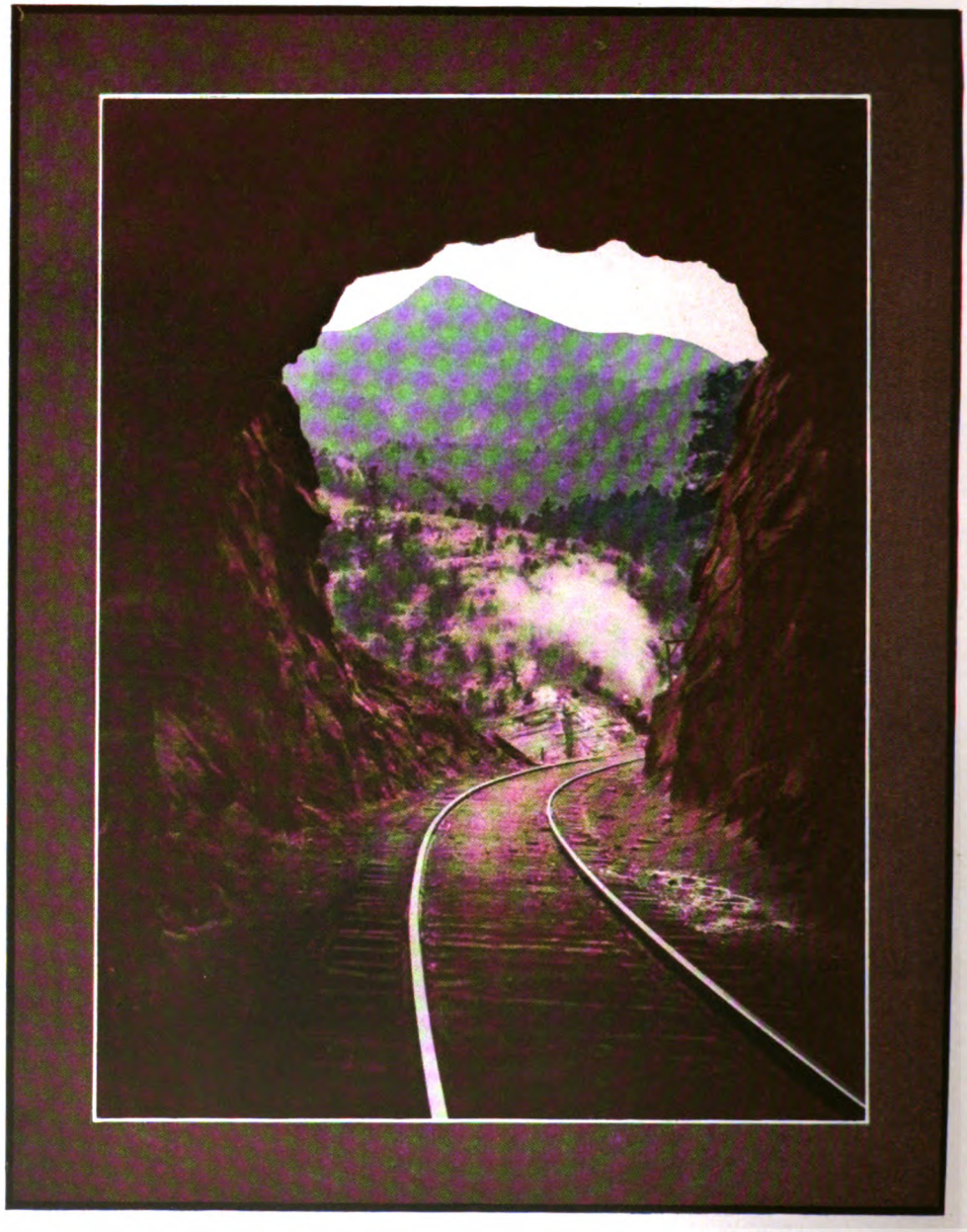

CAMERON CONE
From Railroad Tunnel
near Manitou, Colorado
By CARL FARNSWORTHER

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING SAN FRANCISCO CALIFORNIA

VOL. XVIII DECEMBER, 1911 No. 12

Working For Better Results

By Carl Farnsworth, I. P. A. 2269X

With Illustrations by the Author

THE BOSS OF THE RANCH

HAVING spent my early days on a farm, first in Kansas and then in Nebraska, both locations devoid of scenery calculated to inspire a desire for picture taking, I did not during that time, give much thought to photography. It remained for a sight of the mountains of Colorado to create for me an intense desire for a camera. I might explain that I went out there for a visit of one week and remained three years, so well was I "taken up" with the mountains and the scenery.

The now popular post card size was not then on the market so that the 4x5 kodak appealed most strongly to me. I managed to get my first roll of film exposed, but decided to have it developed and one

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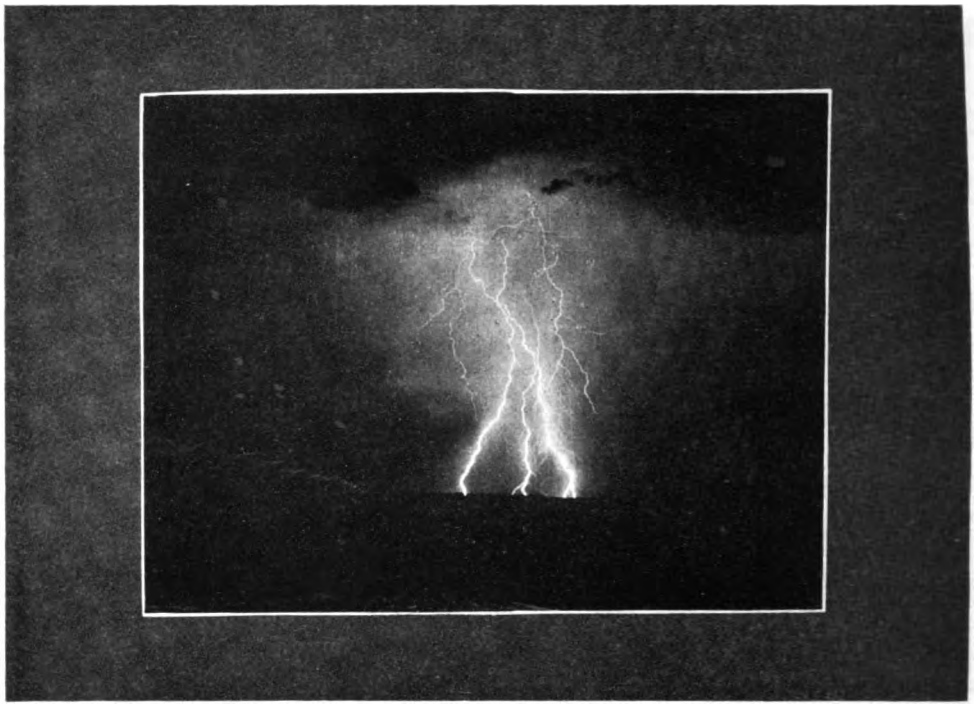

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print made from each exposure, by another. The results; well, I guess nearly every beginner can imagine what they were. I had made snap-shots where time should have been given; some were made without thinking to set the focus; one was blank, and another film, in order to even up matters, carried two images. I decided that I must have a better lens, and that I must do my own finishing. My first camera was a very cheap affair, so I exchanged it for another with a better lens and shutter, one costing twenty dollars, a sum that looked quite large to me, as the price of a camera. Some of my friends saw the matter in the same light, but I replied that I was going to take pictures and I wanted something good.

Exposing several rolls of film in my new camera, I decided to try and develop them. I do not think I got one printable negative out of the lot. Some were under-timed; the time exposures were badly over-exposed; the developer and hypo got quite warm, and the emulsion suffered. I tried to do the whole lot in one afternoon, and spoiled them.

I was rather discouraged and disgusted with myself. Part of the pictures were taken on a trip to the summit of Pike's Peak, and return on foot; the last a walk of about eighteen miles, starting at an altitude six thousand feet, and reaching one of over fourteen thousand at the summit. I naturally did not care to repeat the trip again that summer. But by looking up and following directions more carefully, with further practice I began to get better results. I was, during that time, located in the Pike's Peak region just adjoining the famous Garden of the Gods, the camera fiend's paradise, indeed. Even after I became

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able to secure a reasonable proportion of printable negatives, my great mistake was in wasting films on unimportant subjects.

It was upon my return from a trip to the World's Fair at St. Louis in 1904 that I decided to purchase a developing machine, as I had about eighteen exposed rolls to develop. The machine proved a success in my hands from the start, and I am still using the same one, my negatives averaging better, and the work is much pleasanter than when done by dark-room method. At that time, when taking pictures of objects not moving fast enough to necessitate a snap-shot, I nearly always stopped down to U. S. 128 and gave about one-fifth second exposure, with sunshine. I did this to get sharp detail all over the view. One night scene that turned out excellent, one of the Palace of Education, I made by setting my camera on a stone step near the water, the rules forbidding tripods being used. It was my first attempt at night photography, and I had no idea what time to give, so gave it nine or ten minutes at U. S. 8. The picture, "Lightning," was also my first attempt at that kind of a subject, and, being taken on the open prairie, naturally lacked foreground. I found such pictures were not difficult to take, if one waited until it was quite dark and there was not too much wind. One has but to give the camera a solid support, point it towards the most frequent lightning flashes, set the shutter open at time, and, as soon as a flash occurs, close the shutter. One may have to repeat several times, as not every flash is interesting. I also used a lantern for turning the film ahead, but if one is working from a window, the light in the room will answer. "Cameron's Cone," used as a frontispiece this month, was taken while circling the Pike's Peak Range on foot, a trip for the sole purpose of picture taking. The Peak, seen in the distance, has an altitude of eleven thousand feet, and was several miles away. Pike's Peak is just to the right, but cannot be seen from this tunnel. In taking the picture I barely had time to get outside of the tunnel before the locomotive entered. It can be seen in the picture just emerging from another tunnel below. This road is up the famous Ute Pass, down which the Ute Indians used to trail to the famous Manitou Springs.

My present camera is a 4¼x6½, using film, and fitted with Zeiss Tessar

SIX YOUNG COYOTES

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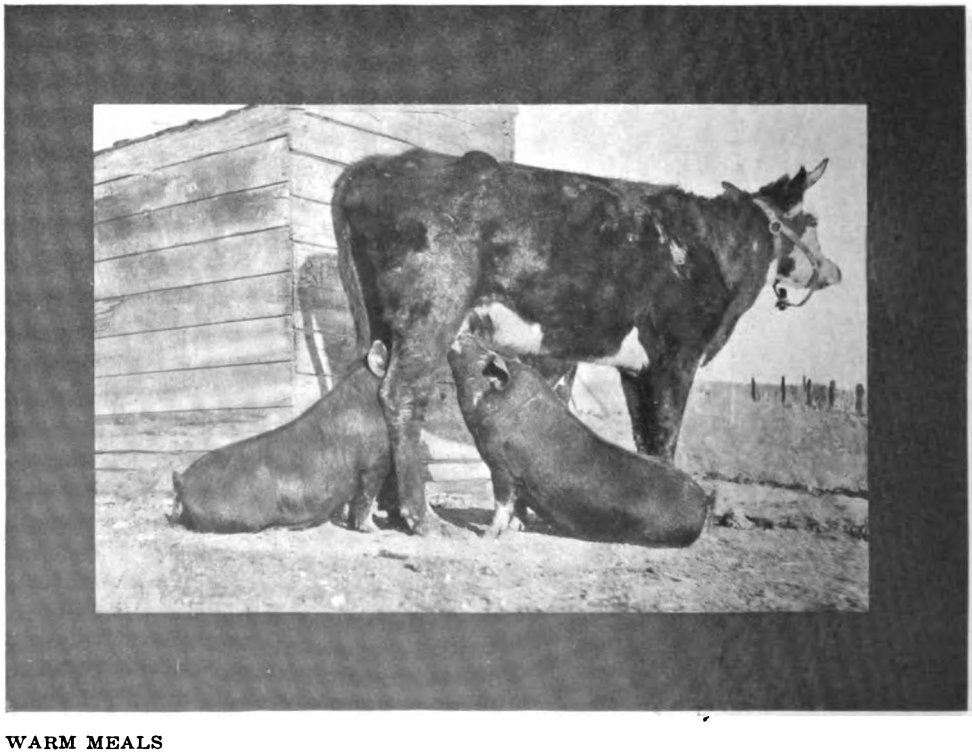
lens, working at f-6.3, and Volute shutter. I find a fast lens a great advantage when working under unfavorable light conditions. With this lens I generally find an exposure of half to one second, sufficient for child pictures indoors, and for most of my view work I use f-6.3 or f-8, giving one twenty-fifth, one-fiftieth, or one one-hundredth second, according to circumstances. In photographing a residence, painted some light color, give one-fiftieth second, when it is just cloudy enough, so that there are no shadows.

In photographing moving trains so as to secure a good smoke effect, patience is necessary. Many times I have set up my camera and waited, only to be disappointed, as a picture of a fast moving train, without smoke, is a failure, in my estimation. Another difficulty with moving trains is getting them at the right distance and angle. Many times I have snapped too soon, thinking they were too close, only to find that they were too far away when I came to develop the negatives. I found that by taking the right angle and having the locomotive about one hundred feet distant, I could secure a good effect; so, after setting up the camera, measure off the distance, and leaving some light colored object near the rail for a guide, I had no trouble in getting what I wanted. One of my best negatives was made in that way, 8:30 a. m. in October, with an exposure of one-hundredth of a second. "When the Elephant Came to Town," was a rare treat for the youngsters. This elephant happened to be traveling overland. The picture of a boy standing on his head is really



WARM MEALS

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A YOUNG ACROBAT
THREE OF A KIND
THE PET COYOTE

a picture of a farmer girl about five or six years old, and there is not one boy in a dozen that can do as well. The picture was taken just for the unusualness of the subject, one-fiftieth of a second exposure, with light clouds, causing soft lighting.

I am often asked: "How did you learn to make pictures?" Or, "Who taught you?" I can only answer that, "I just learned by practice and following directions as carefully as possible." One of my early mistakes was in not being particular enough in keeping my solution the right temperature. In hot weather I either use ice or cold water, putting it in a large basin or dishpan and floating the developing tray therein for a few minutes. Another good plan is to get up early enough in the morning, to find the solutions and wash water cool. Several times this past summer I have gotten up at 3:30 and run a large batch of prints through the developer, finishing before sunrise. The developer and hypo are then at about the right temperature, and one can have all the doors and windows open and work with much more comfort.

Another of my early mistakes was washing my prints in too slipshod a manner. I happened to have running water in a sink and washed my prints by letting the water run on them for an hour or more. Later, quite a number of them faded, particularly in the center. These happened to be a glossy print on printing-out paper, treated with the combined bath for toning and fixing. I later used an extra fixing bath, as I should have done from the start. I also handled the prints over while washing, so that they did not stick together. I now use developing paper almost exclusively, and in washing my prints I use two enameled dish pans and never less than eleven or twelve changes of water. I have known many amateurs who were careless in this most important part of the work, washing their prints in a few changes of water and letting it go at that, only to have them fade away later. Another one of my other mistakes was in sometimes overworking the solution, resulting in stained prints.

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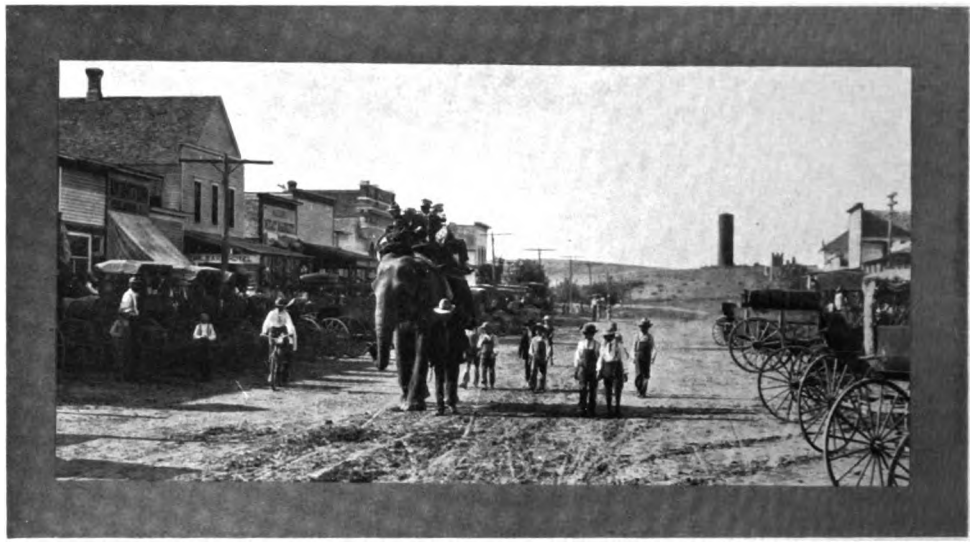
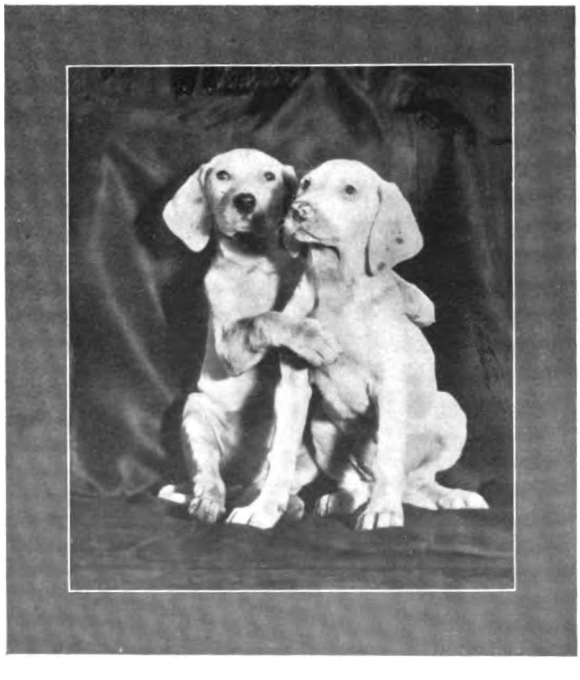


WHEN THE ELEPHANT CAME TO TOWN

I have found that one does not have to live amid mountains or where there is beautiful scenery in order to enjoy a camera. There is something of interest to photograph wherever one happens to be. Every locality has a few bits of pretty scenery that will make attractive photographs if taken at the proper time. Children make very interesting subjects, especially if one can get them at their play. Puppies have been interesting subjects with me.



I have gotten a great deal of pleasure out of my camera, especially in making collections of pictures for my friends. As a member of the International Photographic Association I have been able to exchange and secure many interesting prints, embracing most interesting subjects and some very choice examples of work. While some of the work received has been poor, some has been so good in workmanship that it has made me feel ashamed of my own. However, the exchanging of prints has helped me to improve my own work, and it has shown me where I could find subjects that would be interesting, even where I had at first thought there was nothing worth taking.

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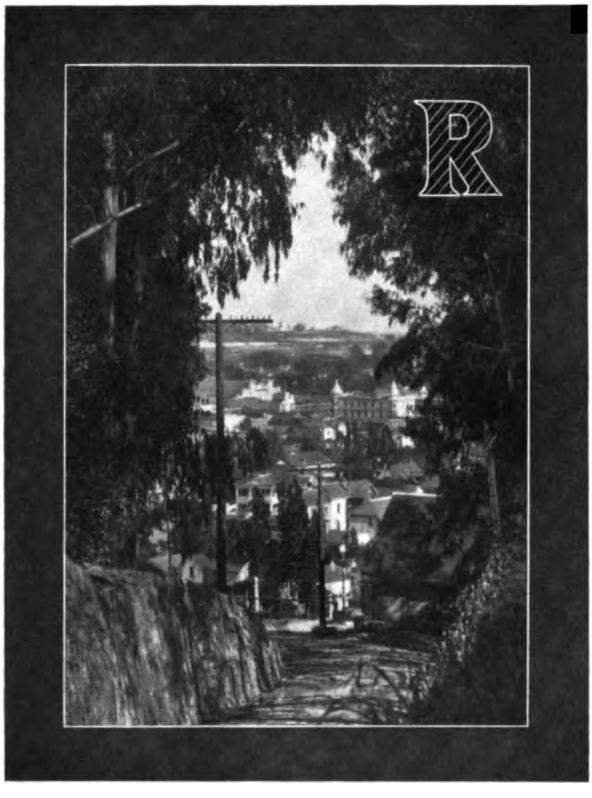
Making One's Pleasure Profitable

By R. H. Appleby, I. P. A. 2733

With Illustrations by the Author



SANTA CRUZ FROM THE HILL

RARELY it is that the enthusiast can make his pet diversion, his hobby, profitable. One man has his auto or motorcycle, another his rod and reel, and still another his gun and dog; but my pleasure producer is a camera. It not only gives me healthful and interesting pastime, but it pays its own operating expenses, but it leaves me with a good surplus in the form of a fine and growing collection of negatives and pictures.

The ability to make one's camera pleasure profitable is not acquired in one lesson, but requires work, patience, and application. However, the work is healthful, taking one into the open air; patience is a virtue well worth cultivating, while application comes as a matter of course to the real camera enthusiast. To come back to my title, I can hardly do more than recount my own experience, assuring the reader that what little measure of success I have achieved can be realized by anyone else if he will but start right.

I am a man past middle age and never had a camera in my hands until eighteen months ago. I started with a little No. 3 Brownie with a fixed focus lens, contenting myself with that until I had mastered it, which proved later to be a wise plan. Then I thought I would like to have a better lens, so traded in the Brownie and got a No. 3 Folding Brownie, which gave me a rapid rectilinear. This proved satisfactory, until one day a professional said to me:

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"You ought to have a camera large enough to make it pay its way." This was a new idea, one that had never occurred to me before. I had been taking pictures just for the fun of it, but had made such rapid progress that it attracted the attention of my professional friend. I traded in the Brownie again and got a 3A Kodak, taking a picture 3¼x5½, a size better adapted for post cards. That was where I first thought of combining profit with pleasure. During this primary work I had not only mastered—to a certain extent—the handling of the camera, but had also learned to mix my own developers, which proved a great saving. The minimizing of expense is quite a factor in this making one's pleasure profitable.

I will endeavor to relate a few of the incidents that sustain the title of this article. There was to be an apple show last fall in an adjoining city, and, being acquainted with the manager, I had no trouble in getting in early, before the crowd got there to obstruct the view, and making a number of exposures, which, being interior views, required time. After making a few fairly good negatives of some of the most attractive features, I printed a quantity of post cards that sold faster than I had dared to expect. When my professional friend saw the negatives he wanted to rent them. I said: "No; but I will loan them to you, gladly." This did me no harm, but good, for it was the starting of a close friendship and has been profitable to us both, particularly myself. I knew that there would be a demand for these cards and had gone to the dealers in my town and asked them if they would like to have post cards of the affair. I sold them to the stores for forty cents a dozen, and they retailed them at five cents each.

To make one's pleasure profitable, one must not be backward; one cannot expect to do business if he is afraid to have it known that he is taking pictures for profit. Get acquainted with the storekeepers in your town who sell post cards, and when there are any special events coming off go to them and ask them if they would not like to have cards of the affair. After I returned from my trip to the Stare Redwood Park I sold a quantity of 5x7 prints because I was acquainted, was not bashful, and had the kind of pictures the people wanted. They sold readily at three dollars a dozen. My friends and acquaintances would frequently ask me to make pictures for them; a business man would want post cards showing the front of his store, a young man would want a post card showing him on his motorcycle, and various other demands would be made upon my skill. For these special cards I charge a dollar and fifty cents a dozen. My opportunities are no better than those of the average camera user, as I am employed during the day and have only evenings and Sundays for my photography. However, I have an annual vacation, and can, in a pinch, get an hour off when necessary, during the day.

After the good success, from a commercial standpoint, of my first efforts, I wanted more. I began to take post cards for my friends. Then it was not long before I found that my camera was too small, bringing about another trade, resulting in a 5x7 Century, with plate holders. I got kits for 4¼x6½ plates, which I use when taking pictures for post cards.

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BERRY CREEK FALLS

A FALLEN MONARCH

The question of plates gave me considerable thought; but, after trying several brands, Standard Orthonon was recommended to me as an all-around plate, it seems to fill my requirements. I find that after one has found a plate

THE GIANT "CHIEFTAIN"

A REDWOOD BRIDGE

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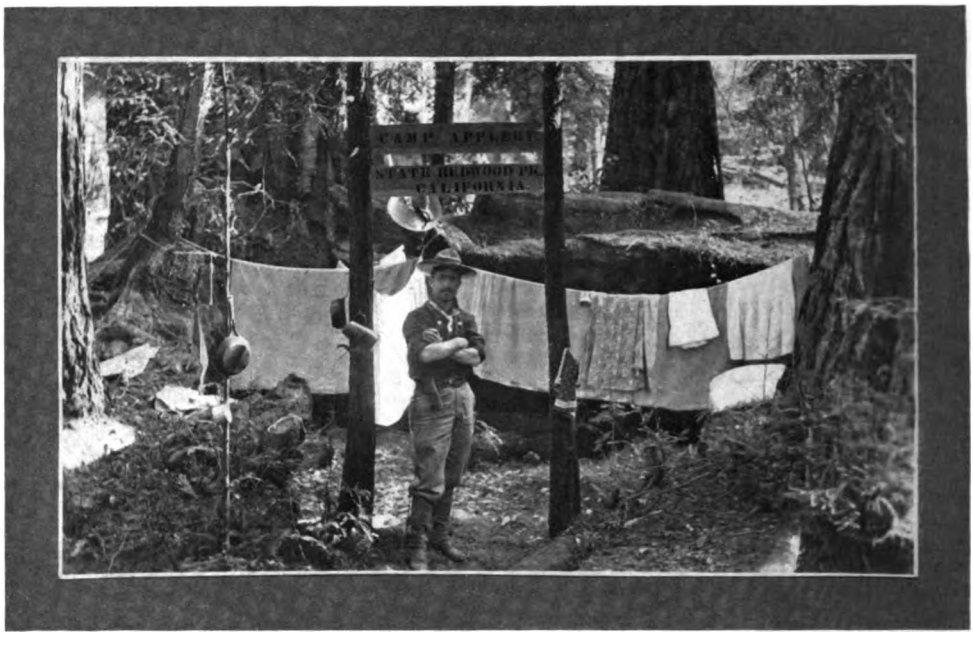

CAMP APPLEBY CALIFORNIA STATE REDWOOD PARK

that gives him good results, it is wise to stick to it. One has learned how to manipulate that particular brand and he knows his formula; whereas by continually changing plates, one is liable to forget how to handle any of them properly and results are not what they ought to be.

I made several trips this summer, which were not only very pleasurable, but profitable. I make it a point to take pictures that are both interesting from a photographic and profitable from a commercial standpoint. This is found particularly in a subject that has a State or national reputation. I will give a brief outline of a couple of such trips.

My first was to Monterey, California, and after making a few exposures of some of the historical subjects in the city, I decided to take in the famous seventeen-mile drive. The only practical way for me to take it in was to walk, and walk it I did. It is trips like this where you get combinations. Healthful exercise, fresh air, fine scenery and good views. Each State, city or country district has its own particular pictorial advantage. A man in the East has a subject that interests the man in the West, and *vice versa*. This is shown by my I. P. A. exchanges.

I took several views along this interesting drive, views that are not only valuable to me as pictures and good subjects for exchange, but pictures that have a commercial value, such as El Carmel Mission, Midway Point, the Ostrich Tree, the first frame house built in California with lumber that had to be brought around Cape Horn, and others of equal interest. While we here have those relics of the early days, the days of the Indian and the Mission Fathers, our vistas of farms and views of farm life are not what might be expected, or what could be had in the East and Middle West.

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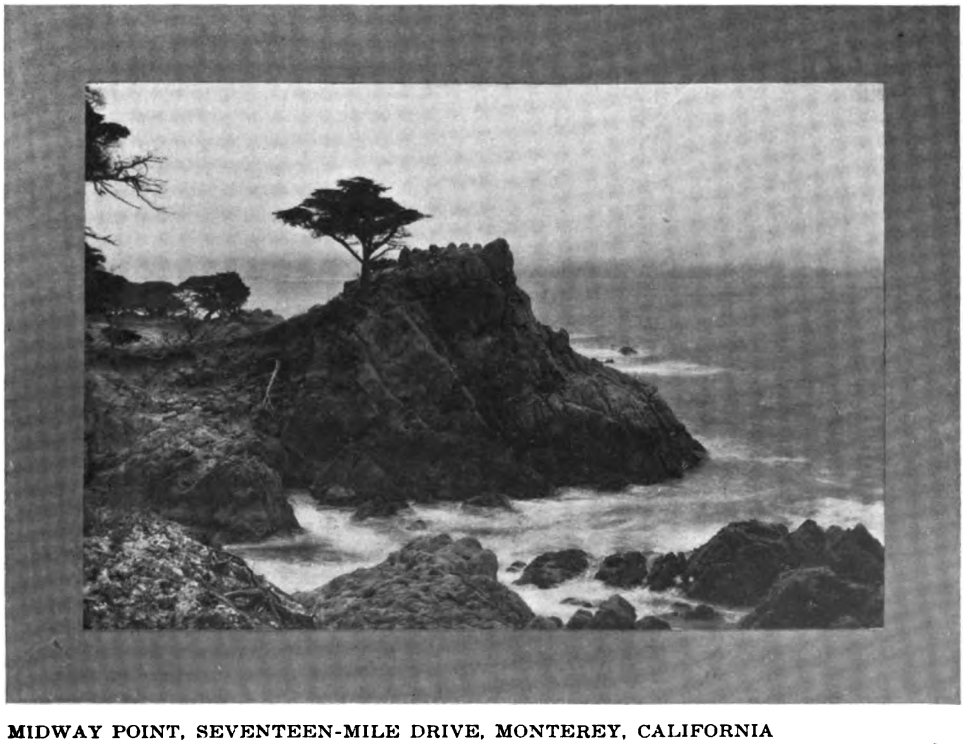
My next trip of particular interest and one where my judgment as to time of exposure was put to the test, was to the State Redwood Park, as already mentioned. When one is out for pleasure he is generally willing to put up with the conditions that surround him, but when that man is a camera enthusiast he becomes forgetful of the inconvenience. In return for his labor he not only reaps the benefits of the fresh air and exercise, but he brings away with him images, on glass or film, of the scenery that it has been his pleasure to behold and convey them to others, as far as possible, in the form of prints therefrom.

It was on this trip that we got next to nature. We did not even take a tent; a couple of blankets, a few cooking utensils, and something to eat, was all the comforts we desired. A word about our camp might be interesting, as it will show how willing we are to make sacrifices when we have something to gain, in this case some good views of nature in this forest of giants.

We found a convenient spot to make camp; a spot where a mammoth tree had stood, hundreds of years ago, but had been destroyed by fire. Around the outer roots had sprung up young trees, forming a circle, about thirty feet across, of trees that are today from one hundred and twenty to two hundred feet in height. The branches, the lowest of which were one hundred feet from the ground, came together and formed a roof over our camp. We gathered dried leaves for our beds and on them spread our blankets, and this was our home for a week.



MIDWAY POINT, SEVENTEEN-MILE DRIVE, MONTEREY, CALIFORNIA

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I judged that among these giant trees the best light for taking pictures must be early morning, which proved to be the case. I would locate my subjects in the daytime; then, as far as possible, make my exposures at 6 a. m. Most of my best pictures were taken about that time, the light being more even and the atmosphere more clear. Quite often, at that time of day, I would stop down to f-16 and give from thirty seconds' to two minutes' exposure, according to the density of the shadows. I found it advisable to follow the old rule, to time for the shadows and let the highlights take care of themselves. There were, of course, exceptions to the morning light practice, where I had to do the next best thing. One was Berry Creek Falls, which, being four miles from our camp and over the mountains, I could not reach until high noon. Stopping down to f-16, I gave twenty seconds' exposure, having learned by experience to give plenty of time to such subjects.

The amateur will find that the Standard Orthonon plates allow of plenty of exposure, using the maker's formula for development. My average stop is f-16, and my time of exposure is judged by the density of the shadows, giving preference to the morning light. I seldom use an expose meter, believing that they cause one to lose confidence in his own judgment. Cultivate and encourage your judgment of proper exposure and you will come to prefer it to expose meters. But remember the shadows in making your exposure.

I am contributing this sketch of my experience for the benefit of those who, like myself, are deficient in photographic knowledge, and they are the only ones who will read it. I would add to the above that a large measure of my success is attributed to CAMERA CRAFT, not alone to the reading matter, but to the advertisements. The subscription was a Christmas present, which I have greatly appreciated. Had it not been for this subscription, I might never have heard of or become possessed of a set of "The Complete Self-Instructing Library of Practical Photography," a work I can cheerfully recommend to any amateur trying to advance. It was from its pages that I learned how to treat known under-exposure, and how to handle halation. I hope, at some future date, to give some samples of my success with these and tell how the results were achieved.

THE AWKWARD SQUAD
556

By CARL FARNSWORTH

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Lost—The "Scoop" of a Lifetime

By R. Prosser, I. P. A. 2112

With Illustrations by the Author

MISS KATHARINE V. LYONS, THE HEROINE OF THE DISASTER. SHE REMAINED AT HER POST IN THE TELEPHONE EXCHANGE UNTIL A NEARBY BUILDING STARTED TO FALL.

EPTEMBER 30, 1911, dawned with a bright sun and cloudless sky—an ideal day for pictures. I was through work for the day at 2:30 o'clock that afternoon and had an appointment to photograph a Sunday school class at the picnic grove at 3 o'clock. Keeping the appointment at 3 sharp, and while engaged, a party of ladies from the nearby sanitarium came along and asked where the smoke over the hills came from. I answered, "From a Buffalo and Susquehanna train just leaving Austin." Austin, six miles from me as the crow flies (ten miles by road and sixteen miles by rail, the wagon road winding around through the valley and over the Allegheny Mountains), was at that minute in the throes of its terrible calamity. About the same time, seven minutes past 3, to be exact, my brother, telegrapher at Sizerville, had heard that "the Austin dam had broke." He was not at all acquainted with the surrounding country and when I reached the telegraph office a minute later he said nothing about it, all the time thinking it was a little dam and its breaking a matter of small moment.

I went back home and about half past four went over to the polling place, it being primary election day in this State. At five o'clock three automobiles passed on the road to Austin, speeding for all they were worth, and all containing doctors from Emporium. We then woke up, found out the true state of affairs, but it was then too late. I would be unable to reach the stricken

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valley in time to get any pictures before dark. Wasn't that a scoop lost, eh?

I had to be contented with writing the story for a leading metropolitan daily, keeping it posted every minute until its own correspondent arrived on the scene at two o'clock Saturday morning. Then Sunday. Oh, well, photographers—amateurs, professional, newspaper, commercial and what not—made

FROM COSTELLO AVE. LOOKING NORTH

STORES LEFT STANDING ON MAIN ST.

a run for the town; and I? Well, I tried to get a substitute for Sunday, but all extra men had to be rushed to the nearest telegraph office to handle the "press," and it was a gloomy day. At noon it commenced to rain, and it poured; it generally does if people have been in an earthquake, flood or some other disaster, and are without shelter.

I did not have the heart to go that Sunday afternoon in that rain; I had missed the big scoop, so I might just as well miss a little one. And while I did not go, everyone else did. We counted seventy-nine automobiles and rigs pass through our village in forty-five minutes, supply wagons, bicycles and people afoot not counted. Coming back they were a sorry sight. Wet? Oh, no; simply soaked! Forty-eight hours after the disaster I reached there with my 8x10 View and 5x7 Graflex cameras. I had no sooner gotten out of the rig than a reporter for a Philadelphia newspaper asked: "Newspaper photographer?" What could I say but "Yes." "Working?" he asked. "No," I replied. "Come on," he said. Well, I photographed the town, the heroes and heroines, the prominent people and what not to suit his taste. His paper

WRECKED MILL. DAM IN DISTANCE

PORTION OF DAM MOVED TEN FEET

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wanted the pictures for an eleven o'clock edition the following morning. I left Austin at a quarter past five, reached home at seven, made the pictures, and with a rig delivered them at a larger town at eleven o'clock, in time for a through train reaching Philadelphia early next day.

These pictures did not suit me altogether, as I wanted some different

FIRST STORE AFTER THE FLOOD

MAIN STREET NOT YET OPEN

views for mounted pictures. So I went again the following Sunday, a fine day for pictures, and obtained the balance.

At midnight, the day of the flood, I was offered fifteen dollars a print, but the only reply I had for the messages was, "Fell down through a misunderstanding." The photographer at Austin lost his studio with its entire contents when the flood struck Main Street, where it was located on the third floor of a building. He was thrown out through the window, landing on a piece of wreckage; was carried more than a mile and thrown upon the hillside with only slight injuries.

I must make one more trip to Austin for a newspaper that wishes a panorama, 8x30; then I do not expect to visit it for a couple of months. As far back as last August, meeting a correspondent who resided at Austin, he remarked that I should come over and get some views of the dam and the town, "as they may be worth something some time." I, like those who lost their lives, thought there was no hurry, and therefore cannot show the reader any views taken before the disaster. I do not offer this as having any helpful suggestions on anything photographic, but merely as a photographic story of the Austin disaster for the benefit of CAMERA CRAFT readers.

BLERIOT MONOPLANE IN CHINATOWN WRIGHT BIPLANE
SOME NO. O GRAFLEX PICTURES By G. P. FLORES, PH. D.
(Center picture given one seventy-fifth second; other two, one two hundred and fifteenth second)

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A Good Form of Studio Receipt

By P. Mitchell, I. P. A. 723

The illustration below shows the form of receipt which I have had printed and bound in pads containing alternate white and yellow leaves, bound together at the left-hand end, the alternating yellow leaves being perforated at that end so that, being a carbon copy of the white one above, it can be torn out and handed to the customer as a receipt. The cut below is reduced in size, the actual leaves being about four inches wide and eight inches long. The yellow one, the carbon copy handed the customer,

HELMETTA, N. J. Oct 20 191/ | STYLE Cab Oval | No. 2345

QUANTITY 1 doz | AMOUNT $5.00 | PAID 2.50 | DUE 2.50

NAME Mrs J. W Smith | CITY Oakland

STREET 37 Willow ave | MAIL ✓

REMARKS Send proof on Friday

MITCHELL'S PHOTO STUDIO

LOCATED MIDWAY OF HELMETTA AND SPOTSWOOD

WHEN CALLING FOR PICTURES BE SURE TO BRING THIS TICKET WITH YOU. REMEMBER YOUR NUMBER IN CASE YOU LOSE THE TICKET

PHOTOGRAPHS OF BABIES AND CHILDREN ARE BETTER IF TAKEN EARLY IN THE DAY

A DEPOSIT OF ONE HALF REQUIRED ON ALL PICTURES. POST CARDS ARE CASH

ALL WORK GUARANTEED

DON'T LOSE THIS TICKET.

READY 1 2 3 4 5 6 7 8 9 10 11 12 13
14 15 16 17 18 19 20 21 22 23 (24) 25 26
27 28 29 30 31

is brought back to the studio when the pictures are called for. When the pictures are delivered and the transaction closed, the envelope in which the negative is enclosed is to be filed away with the white ticket pasted on the outside, for future use should records come in.

The filling out of the above ticket explains its use. The space MAIL is not to be used if pictures are to be called for; when pictures are to be mailed a check mark is made in that space as shown. The date on which the pictures are to be delivered is indicated in the same way or else by being ringed as shown.

When the yellow ticket is brought back and the pictures delivered, it is stamped on the back with a rubber stamp reading as follows:

DELIVERED 8/9/11
DUPLICATES OF THIS ORDER CAN BE HAD AT ANY TIME
When ordering duplicates be sure to return this slip with the number on the reverse side.

The date at the upper left hand corner being added in ink or pencil. The stamped ticket is then returned to the customer for use when ordering duplicates. Of course a great number will not take the trouble to save these slips, but they are a reminder that duplicates can be obtained, the stamp suggests that duplicates

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are frequently ordered, and the orders from the customers who do retain the tickets will well repay the photographer for the small amount of trouble, particularly as the negatives are all filed away with a duplicate, the original white ticket, pasted on the envelope.

I do not urge others to use exactly the same form; I have given mine simply as being suggestive. Others, by giving the matter a little thought, can work out variations better suited to their individual needs. There is no reason why the plan cannot be changed to facilitate the handling of orders for any studio from the smallest to the largest.

How to Make a Magnesium Printer

By William Mathison, Jr., I. P. A. 2525

✷

With Illustrations by the Author

A ROAD THROUGH THE WOOD

RATHER presumptuous, perhaps, but as a martyr to the cause of Photography, I am going to tell the reader how I overcame a difficulty, giving him the benefit of my little store of experience in printing gaslight papers. And, it was a difficulty, one that had caused me more trouble than all the others put together. While I do not know as much as I would like about the pictorial side of photography, I have taken many pictures that have had a large sale, requiring many prints, and this has given me a wealth of experience in printing. I have tried about every kind of lamp I could get, and I feel sure they have been the cause of my waste-basket containing so many sheets of good paper that had been spoiled, and of my store of patience having so often become exhausted.

I have at last discovered that, for myself at least, there is no illuminant equal to magnesium ribbon for printing gaslight paper. It has a speed that enables one to cut his exposure time to half or less, and it saves a negative from getting so warm that blisters come on the paper; in fact, it is a blessing to the amateur, and one that costs many times less than kerosene. My first

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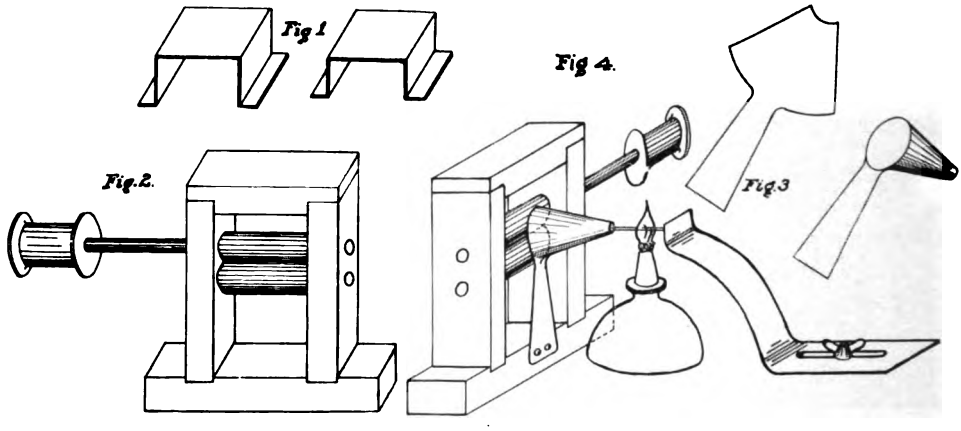
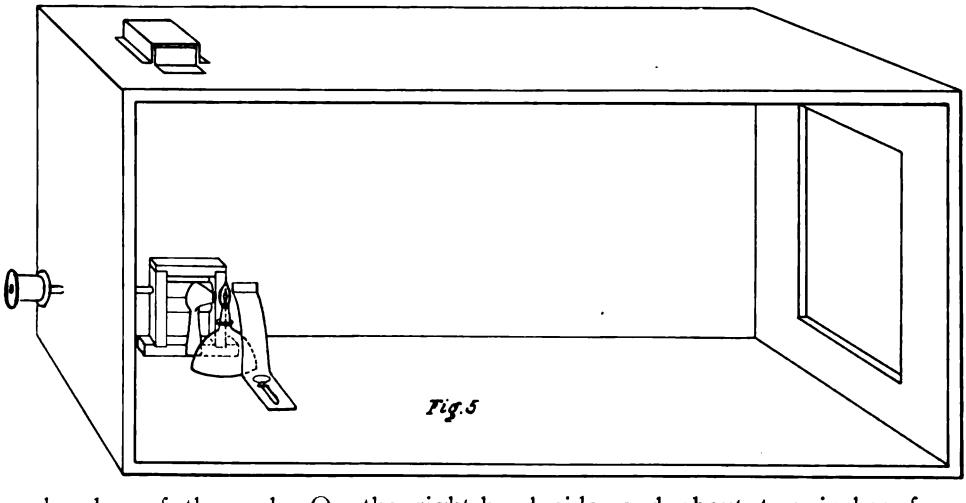
experimenting along this line was done with flash sheets cut into strips; and, finding its value, I could not get it half fast enough. In the meantime, I made a printer, the one that I will describe, and one that has given me entire satisfaction. And best of all, it was made at practically no further cost than the time required. The material can be found at almost any store, or about the home. The following description will enable anyone to make one, and I



believe that any worker who makes one for himself will see many chances for improvement.

Securing a box 9x10½x20 inches, I carefully removed one of the nine-inch sides to be used later as a door; and, taking the box with the open side to my left, I marked off on the near end, a rectangle, three-fourths of an inch larger each way than the negatives to be used, in my case, 5x7s. This made the opening 5¾x7¾, and I cut it as near evenly spaced as possible from



each edge of the end. On the right-hand side, and about two inches from the farther end, I cut an opening, 2½x5 inches, and covered it with a piece of ruby glass so that I could see my lamp, gauge, and so forth, by looking through it. I next cut a hole in the top of the box, about the same distance

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from the same end, cutting it two and a half inches square. This was to allow the smoke to pass out. Over this I fitted a light-break, made by cutting two pieces of tin, 3x6 inches, and bending them as shown in Fig. 1, and putting one piece across the other, as shown in the sketch of the complete apparatus. I next made the feeding rollers and frame. These rollers are about one inch long and about a half inch in diameter; the upper one having a handle about five inches long and thick enough to take an ordinary cotton spool. The frame was so made that it would just take the rollers, one being drilled with a hole to allow the long handle to pass through. I located the center of the rollers on the outside of the frame and drove a short nail through each to act as an axle upon which they could turn.

A piece of tin was then cut, as shown in Fig. 3, and bent to form a small funnel with a wide handle, also shown in Fig. 3, soldering the overlapping sides. Taking the frame, with the handle on the right-hand side, I tacked the handle of the funnel to the bottom of it, so that the small opening came directly opposite the center of the two rollers. This permits the ribbon to pass through and extend out over the lamp; and, when the ribbon burns, it stops doing so as the point of the funnel is reached. A gauge, shown in Fig. 4, was made from a strip of brass and bent to the shape shown, in order to fit the lamp. This is so arranged to make it possible to bring the flame of the lamp to within about one-eighth of an inch of the gauge, in order that the ribbon will start burning at the end. In running the ribbon out to the gauge, it passes through the flame to the gauge before starting to burn, as burning does not take place the moment the flame is reached. If it did, a different arrangement would be necessary. This gauge should be fitted with a slot, as shown in the sketch, to permit it to be adjusted for different lengths of ribbon, as more or less light is wanted. About half an inch is generally required with my negatives. The lamp, which was from an old pyrograph outfit that happened to be lying around, has simply a piece of yarn for a wick. The flame is small, yet large enough to do the work. A lamp

DUCK ON THE ROCK

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SUMMER BOARDERS

A FAMILY GROUP

can be easily improvised from a bottle, or from a cheap, small oil can with the tip of the spout cut off.

The grooves for the ground and plain glass were next fitted. I fastened two sets of strips at both top and bottom of the box, spacing them so that the glasses just slipped between each pair. The ground glass I placed five inches from the printing opening and the plain glass three-fourths of an inch nearer the light. The roller frame was placed in its end of the box and located as nearly as possible in the center, drilling a hole at the proper height to allow the handle to extend through the end of the box, keeping the frame two inches inside the end. I screwed the frame to bottom of the box and slipped a spool over the end of the projecting handle to facilitate turning. A small brad driven through spool prevents it turning.

Lastly, I took the side of the box that was at first removed and replaced it on hinges so that it opens upward. Near the bottom I bored three or four holes to admit air, trapping them, as explained, for the smoke outlet at the top. I drilled another hole in the end of the box, in line with the point of the funnel, through which the ribbon passes into the box. This, I believe, is safer than to have the magnesium inside; and, by keeping the ribbon on top of the box, it does not interfere with the opening of the door.

Turning the box around to the ruby glass side, I can see the lamp and ribbon, and the moment the end of the latter reaches the gauge and burns, I know the exposure has been made, and without any trusting to chance. Shading any part of a negative is easily accomplished by sticking a piece of tissue paper on the plain glass, softening the light on any particular point on the ground glass, and this, I find, does not make the shading too pronounced. If desired, a small shelf can be placed under the exposure end for the printing frame to stand on, or a book may be used as a support. In selecting the box, much can be gained by choosing one that is made up of boards that are tongued and grooved, as this prevents the light passing through the cracks. The exact size of the box is, of course, not important.

How shall we hand down to future ages the spirit and form of all the beauty we see filling the universe? Art alone can perpetuate the living realities of the world, the things of Heaven, and of Buddha, the life of men and women,—aye,—even of the birds and beasts and herbs and trees.—HOKUSAI.

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Lantern Slides In Pure Color

By H. D'Arcy Power, M. D.

The lantern slide of today is either of the usual black and white order (or a toned monochrome), or a tinted slide in which the image is black and the surrounding gelatine colored. Notwithstanding the skill with which this tinting is often executed, the effect is always detracted from by the presence of the black silver deposit. Some time ago Dr. Traube, working on an idea suggested by a previous worker, patented a process for making slides in pure analine colors, the principle of which was fully described by me in the *Photographic Digest,* and later a modification was described by Professor Namias (*vide* CAMERA CRAFT, September, 1909). The full value of these processes did not occur to me at the time I described them, because a slide in bright yellow, green, blue or scarlet seemed not to offer any improvement on plain black and white. This seems to have been felt by others, for certainly the Traube method has remained practically unused.

However, I am in the habit of trying out all new ideas when I can get the time, and in due order I started on the Traube method. I quickly found out two things: First, that the working directions I had previously read were quite inadequate and might easily lead to failure and disgust; secondly, that while the slide, made as recommended, that is, in monochrome, is rarely pleasing on account of the too vivid color, yet by using it as a basis for subsequent full tinting a result of surpassing beauty can be obtained, one far transcending an ordinary colored slide, and this for the very good reason that the basis for the color is white and that the tint is absorbed by the silver image and not necessarily by the surrounding gelatine. I now propose to describe the details necessary for success, which have not been previously given, and then to show the various ways in which the method can be applied.

THE PRINCIPLE: The silver image of a lantern slide or transparency is converted into a silver iodide. Silver iodide acts as a mordant to basic analine dyes and to the eosin group. If, therefore, the slide so transformed is placed in a solution of the dye the iodide will absorb the dye, the excess of which can be washed out of the clear gelatine, but not out of the image. The silver iodide in this colored image may then be dissolved out, leaving the color solely combined with the gelatine.

CONVERTING THE IMAGE INTO AN IODIDE, A NEW WAY: There are several ways of doing this. Traube used a bath of iodine dissolved in iodide of potassium, but it stains the fingers and is otherwise objectionable. It occurred to me that a mixture of potassium, ferricyanide and potassium iodide should give the iodide, just as a similar mixture yields the bromide in the well-known sulphuretting process, and it does. A bath is made up of potassium iodide ten grains and potassium ferricyanide twenty grains to the ounce of water, and in

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this the slide is immersed. It immediately bleaches, but should be allowed to remain ten minutes longer, until the yellow tint of silver iodide is fully developed. Then wash ten minutes.

DYEING THE IMAGE: The plate is next immersed in a solution of the required dye. I have used a strength of a grain to the ounce. It was here that I ran across my first snag. I had read that the image fixed the dye immediately. It mostly does nothing of the kind and the plate must be left in the solution until the yellow color of the iodide has completely disappeared, which, with dense slides and some dyes, may require several hours. The complete saturation of the silver is a necessity. The slide is next placed in running water where it must remain until the whites are clear of color. With some dyes this occurs quickly; with others slowly, and with many not at all; and, of course, such must not be used.

AFTER TREATMENT: We now have a perfect slide in monochrome. It may be so used, and sometimes with good effect. Or it may be used as a basis of further tinting with the colors generally used in coloring lantern slides. Thus the dominant color can be, let us say, methylene blue and the remaining tints added thereto. These last, as a rule, are not fixed in the silver, but color the gelatine in the usual way. More often, when the slide is to be fully colored, it is better to take the slide directly after iodizing and directly tint up its yellowish white image. In this way most surprisingly beautiful results are obtained. There is a possibility that the silver iodide might ultimately darken, but it is a silver salt that is little affected by ordinary light, and I have seen no change in my examples. In these slides retaining the matrix of iodide the opacity of the latter demands that the original slide be kept thin. A slide of an entirely different character is obtained by staining the iodized slide and then dissolving out the silver salt in hypo. Before so doing the slide must be immersed in a solution of tannic acid for ten minutes, or, with the disappearance of the silver, the dye will be set free. I use a 10 per cent solution of tannin to which a few drops of formaline have been added to prevent decomposition. Such a bath can be used over and over again. Silver iodide dissolves slowly in hypo and it may need a long immersion. After washing we have a slide of wonderful softness and tranparency. It also may be used as a basis for further coloring with the usual tints.

THE DYES: A list of the useful dyes and their special properties has still to be made. My own experiences are limited but definite. Methylene blue gives an excellent image of a somewhat neutral blue, good as a basis for other colors; washing over with auramine gives splendid light greens; with saffranin brilliant reddish orange. Thus a landscape can be made with the first as the base color with fine effect. Alone, it makes excellent night pictures, especially moonlight seas. Toludene blue requires long washing to remove it from the gelatine which it will ultimately leave quite clear. The image is a fine blue, verging on violet. For lightly draped figures posed near rich hangings it is very effective. Nigrosine stains well and cleanly. It gives a neutral blue-black image, good alone or as a basis for further coloring. Methylene green gives an excellent neutral green image, good for pine trees or dark landscapes;

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easily brightened up with auramine, it is a most useful dye. Brilliant green dyes well, the result very bright, excellent as a base when picture is in great part a strongly lighted foliage. Guinea green is not unlike the last, but of a different quality. Auramine is light, as a basis, but invaluable to modify other colors by later washes. It is a most powerful and brilliant yellow. Bismarck brown takes well, yielding a light brown image, good for interiors. Saffranin gives a very beautiful light pink image; more useful as an accessory dye than as a base for the image.

The above dyes I have carefully tested out and found to be good. The following I have tested and rejected because they fail to dye or else cannot be washed out of the whites: nachtblau, phenalin brown, and carallin. The following have been recommended, but I have not had an opportunity of examining them: acridine orange, chrysoidine, rhodamine B, xylene red, methylene violet, Victoria blues and greens, eosin, erythrosine, Rose Bengal, Phloxine-Uranine, and also the alizarine colors.

It is to be noted that no judgment can be passed on a color until the effect is seen upon the screen. Thus, malachite green gives a slide of delicate green color, but it projects brown. We have in this process the power of making most beautiful slides, and the difficulties are not at all great.

STEREOSCOPIC DEPARTMENT

The Simplicity of Stereoscopic Photography

This article is reprinted from "Stereoscopic Pictures and How to Make Them," by Alec J. Jones, a booklet cataloguing the stereoscopic apparatus manufactured by W. Butcher & Sons, Limited, London. It is so good that we have felt justified in departing from our rule of original articles only in order to place it before our readers.

Let us assume for the moment that you are an amateur photographer, and that you know what stereoscopic pictures are, and that you wish to produce them. Possibly you have no desire to read a lengthy treatise on the subject, and you may accept our assurance that it is not necessary. All you really require are a few simple but comprehensive instructions on the essential points.

INSTRUCTIONS: Expose as usual, just as if you were using an ordinary camera. Of course, you must have a proper stereoscopic camera.

Develop as usual, favoring detail rather than excessive contrast.

Print as usual, without cutting either negative or paper.

Trim the prints as usual; a glossy paper is generally preferred. It may be printing-out, gaslight or self-toning paper.

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N. B.—Up to this point everything is "as usual," no special labor, knowledge or skill being required.

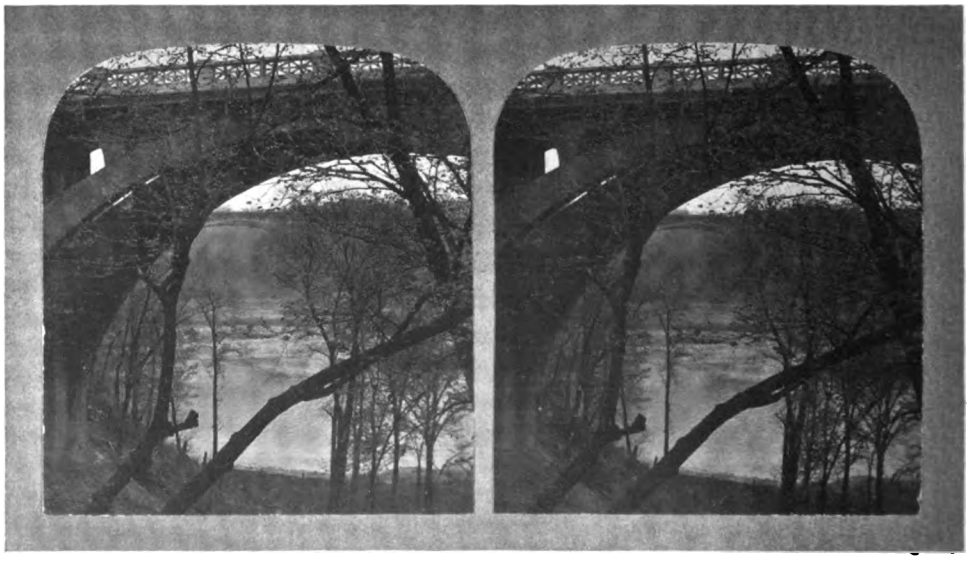
TRIMMING: This is quite easy. Select from each half of the finished print a portion two and three-fourths inches wide from side to side. The two halves should be trimmed alike, working to the nearest foreground objects; a single leaf, or blade of grass, or bit of stone is a sufficient guide. If you trim the foregrounds alike, you will find that the backgrounds are automatically, and without effort on your part, cut according to the approved principles, with the requisite difference. Never mind about this last point; it is automatic. All you need to do in taking your vertical cuts is to trim your foregrounds alike in the two halves. The eye is very elastic and accommodating, and many workers do not worry about one-sixteenth of an inch of inaccuracy.

The base lines must be level, so that they cut the same objects in each picture. The base line may be cut first, then the top line parallel to it, and then the vertical cuts as per preceding paragraph. This is my own method.

MOUNTING: Make a small dot to indicate the center of the mount. Mount each half of the print close to this dot. Some good workers mount the two halves one-eighth of an inch apart, not more. Some prefer the halves close together.

It is absolutely essential that the right-hand half of the print must be transposed to the left-hand, and the left-hand half must be placed on the right hand. This is a really vital matter.

If you have understood and assimilated the foregoing instructions on trimming and mounting, you already know more than many amateur and professional stereoscopic slide-makers. Nothing further is necessary. You can now set to work and produce slides of which you will have reason to be proud. They ought to be a source of great pleasure to yourself and your friends, as long as you live.



LAKE STREET AND BOULEVARD BRIDGE BETWEEN ST. PAUL AND MINNEAPOLIS By A. T. HUDELSON

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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—THE EDITOR.

WASHING PRINTS: In washing my prints I use a small hose with one end attached to the bathtub or sink faucet, which hose is closed at the other end but with several small holes along one side for about twenty-five or thirty inches from the closed end. This end is coiled at the bottom of an ordinary wash basin, with the small holes turning upward. When the water is turned on the force of it, if rightly adjusted, will keep the prints in motion near the top of the basin without clotting the prints together. This method washes my prints thoroughly without attention, consuming less time than any other method I have tried.—E., Montana, I. P. A. 2954.

ANOTHER USE FOR KITS: The other day I had to make a lot of prints from 5x7 negatives and had but two frames of that size. The negatives were slow printers, in the process being used requiring several minutes' printing. I happened to have some larger frames and a supply of kits with 5x7 openings, so I placed the negatives in the kits and used the larger frames as well as the two that were the same size as the negatives. It worked so well that I have given up the idea of buying some extra 5x7 frames that I thought I needed.—Richard J. Russell, California, I. P. A. 2465.

UNNECESSARY PRECAUTIONS: Most amateurs are mortally afraid to allow any white light to reach their negatives before they are fixed, before they come from the hypo bath. This is a mistake. If they are well rinsed to remove the excess of developer, and all plates should be so rinsed from the developer before going into the fixing bath, and then placed in the hypo bath for a minute or two, there will be no danger from white light. It is not at all necessary to protect them from white light as the action of the hypo is to check development at once.—J. M. Kane, New York, I. P. A. 1873.

MOUNTING WITHOUT COCKLING: To mount prints so that they will not warp the mounts, I simply use white shellac. With Solio or any other printing-out paper I go over the backs of the dry prints as they lie on the ferrotype plates, applying it with a brush. Gaslight prints are pinned, face down, to a board and given a coating in the same way. It dries rapidly and the prints can be removed and trimmed at once. They are mounted by placing them in position, covering with a piece of tissue paper and going over them

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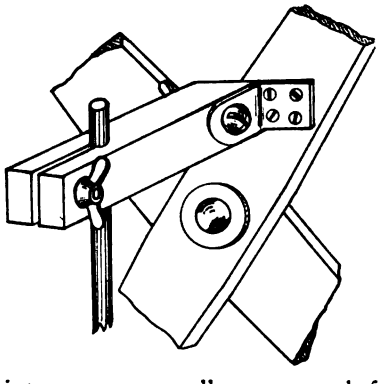
with a moderately hot flatiron. If you will follow this plan you will have no more trouble with buckled mounts. Avoid the orange shellac as it may stain the prints, particularly the gaslight ones. Trim the prints between applying the shellac and mounting in order to get neat, clean edges.—J. M. Kane, New York, I. P. A. 1873.

A NEW SULPHIDING SOLUTION: For the bleaching solution the following is recommended:

Ammonium bromide	10 grams
Potassium ferricyanide	35 grams
Water	1,000 cubic centimeters

The above solution can be used repeatedly until exhausted. For the sulphiding solution twenty grams of barium sulphide is dissolved in one thousand cubic centimeters of water and kept as a stock solution. When required for use this can be diluted with an equal amount of water. After redeveloping there is to be found some white deposit on the prints. This can be removed, while still in the washing, with a tuft of cotton. The advantages I claim for this redeveloper are three: First, it is more stable than the corresponding sodium or potassium salts, either in the solid form or in solution, and therefore it gives more uniform results on average prints; second, its smell is not as offensive as the sodium salt—this is especially to be appreciated by the workers at home, and, third, it gives a tone which is the nearest approach to a real sepia.—Gabriel P. Flores, Ph. D., California, I. P. A. 2185X.

A REFLECTOR FOR HOME PORTRAITURE: The reflector support is only the base and upright of an old collapsible iron music stand. Onto the upright standard I fasten, by means of the clamp shown in the accompanying sketch, the reflector frame consisting of two 1x¼x60-inch laths, riveted together centrally. Besides the rivet, the sketch shows the two small brass bracket pieces used and the two 1¼x¼ bolts with winged nuts, all the hardware required. The clamp piece is made out of hickory, slotted as shown, the piece being 4x1x¾ inches. The clamping screw at the slotted end allows the reflector to be raised or lowered, while the one at the other end allows it to be placed at any desired angle. The reflecting material is attached to the framework by means of thumb tacks. When this last is removed the whole framework can be folded into a very small space, and for convenience I think such a reflector is hard to beat.—Arthur W. Schoof, New Jersey, I. P. A. 2589.



THAT TRIPOD SCREW: Some time ago I was out on a trip on a railroad motor car, photographing scenes along the road. The vibration of the car caused the tripod screw to keep working out. As a string was a bother, I removed the brass plate from the tripod head, taking out the screws with my

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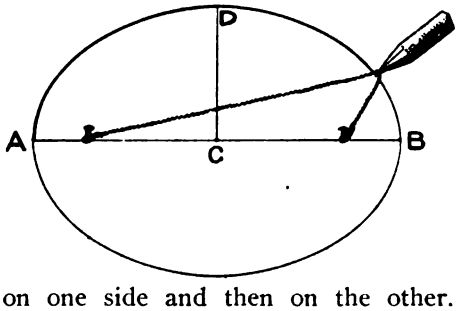
penknife, and wrapped a piece of thin copper wire around the stem of the screw between the plate and the threaded part, winding the wire in the opposite direction to the thread of the screw for about three turns. The plate was then screwed back into place, and, although that was over two years ago, I have had no more trouble with the screw. By wrapping the wire in the opposite direction from the thread, it cannot engage the plate, because that is cut for a right-hand thread.—P. W. Tooth, California, I. P. A. 2230.

TO MAKE OVALS OF ANY SIZE OR SHAPE: Draw a line, A—B, through the center of the mask and bisect it at right angles with another, C—D, the first to be the desired length of the oval and the latter half the desired width. Next make a loop in each end of a piece of strong thread or string, according to the size of the oval, the extremes of the two loops to be just the same distance apart as the length of line A—B. Then drive two strong pins through the mask into a board, the pins to be the same distance from the center of the oval, or C, as C is from D. Place a loop over each pin, insert the point of a sharp pencil and draw the outline, first on one side and then on the other. Bringing the pins closer together will widen the oval; putting them further apart will make the oval more narrow, the length of the oval remaining the same, which is the length of the thread between the two loops. The length of the oval is, of course, determined by the length of the thread between the extremes of the two loops.—A. J. Latson, Colorado, I. P. A. 2412.



A VALUABLE INDEX: I was very much pleased with Mr. Crum's article in the September issue as it confirmed my own experience that a vast amount of valuable information is contained in the photographic magazines. But the information, much of it, is such that it comes into requisition at some future time, often at a moment's notice, and one cannot recall just what magazine or what issue of such magazine contains it. The result is that one has to spend time and patience searching it out, possibly failing to find it altogether. I have overcome this difficulty by indicating, index fashion, the articles formulas and the like, together with the name, date and page of the magazines, in a special note book kept for the purpose. I can now find, at a moment's notice, any item of the information I have seen fit to index. I am satisfied that the few minutes spent in posting my index each month are amply repaid.—David J. Sheahan, Washington, I. P. A. 2933.

AN IMPROVISED PRINTING FRAME: I found it necessary to make a number of blue prints recently and, not having the proper frames, I used a makeshift device that answered the purpose quite well. It was simply two 5x7 negative glasses, held together, with the negative and printing paper between, by means of two spring clothespins, one at each end. This frame works very well with all gaslight papers. The one drawback lies in the fact

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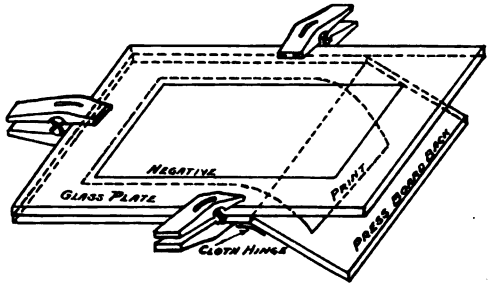
that the "frame" cannot be opened to inspect the progress of printing, when printing-out papers are used, without disarranging the paper and thus producing blurred images. This can be overcome by employing bits of gummed paper to attach one end of the printing paper and its two sides to the negative. A further improvement is to use a heavy piece of binder's board in place of the lower sheet of glass, cutting it across at about the same place that the back of a printing frame is hinged and pasting on a strip of cloth. This necessitates the use of two more of the spring clothespins, placing them so that they grasp the device at the two ends of the cloth hinge. To open, these two extra pins are set back a little to make them clear the hinge, the pin on the end removed and the hinged piece of binder's board turned back to permit the print to be examined. The pin on the opposite end must not be disturbed and the two at the side returned to their position at the end of the cloth strips after replacing the end one that was removed while examining the print. The rough sketch herewith will explain the device last described quite clearly.—Blue Print, Minnesota, I. P. A. 2480.



TANK DEVELOPERS FOR FOCAL-PLANE EXPOSURES: I have experimented with the two following developers and like them better than any I have heretofore used, and I have used a great many. The first, a glycin formula, is as follows:

Glycin	60	grains
Sodium sulphite (dry)	180	grains
Sodium carbonate (dry)	180	grains
Hot water (preferably distilled or boiled) to make	18	ounces

To use for tank development of Kodak film or Seed's 30 plates, take one part of the above and three parts of water. Time twenty minutes for film and twenty-five minutes for plates, at a temperature of between sixty and sixty-five degrees.

A metol-glycin formula is as follows:

Hot water (preferably distilled or boiled)	48	ounces
Metol	45	grains
Glycin	30	grains
Sodium sulphite (dry)	75	grains
Potassium carbonate (dry)	150	grains

This is used in a tank without dilution; time and temperature same as above.

These two developers give the best obtainable results from focal-plane exposures. By that I mean the negatives are true in tone value, not excessive as to contrast as are negatives developed with pyro in a tank. The shadow detail is brought out without clogging up the highlights; and that, in my opinion, is what is wanted in dealing with quick exposures.—Gabriel P. Flores, Ph. D., California, I. P. A. 2185.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XVIII SAN FRANCISCO, CALIFORNIA, DECEMBER, 1911 No. 12

A Merry Christmas and A Happy New Year

This Is the I. P. A. Issue

Here it is, that issue we proposed to devote to the articles and pictures contributed by the members of the International Photographic Association. We believe all our readers will agree that it compares favorably with any preceding issue. The articles are both interesting and informative; the field that is covered is a wide one, while the illustrations have a variety and range that should make them particularly helpful to our readers. And best of all, the supply was much greater than our space would accommodate, showing most conclusively that the Association is made up of a body of earnest photographic workers who are capable of rendering practically unlimited assistance to each other, and to the new members who are constantly joining its ranks. Few, we fear, realize how much can be learned by the isolated worker who will join the ranks of the I. P. A. and make intelligent use of the advantages which it offers. There is not, to our knowledge, anything which so closely approaches in character the favorable conditions that maintained in camera clubs of some ten or more years ago, as does this Association. The camaraderie of congenial spirits engendered by the necessity of a mutual exchange of experiences and information gained thereby, made for, in clubs of that time, a more helpful organization. Simplification of process and more diversity of aims, has, in some measure, altered all this in the larger towns where clubs are possible. For isolated workers and those who have not the benefits of a club at hand, the International Photographic Association offers inducements that should not be overlooked.

A Correction

William H. Phillips wrote us, although promptly, too late for proper correction in our last issue, advising that the picture, "A Fresh Broken Trail," on page 453 of our October number, was not his work, that he was "not the maker of that beautiful picture." We are sorry to say that through a mistake on our part the picture was credited to Mr. Phillips instead of to the maker, Dr. Walter H. Winchester. Our apologies are due both gentlemen and are hereby tendered with all humiliation. Mistakes will happen.

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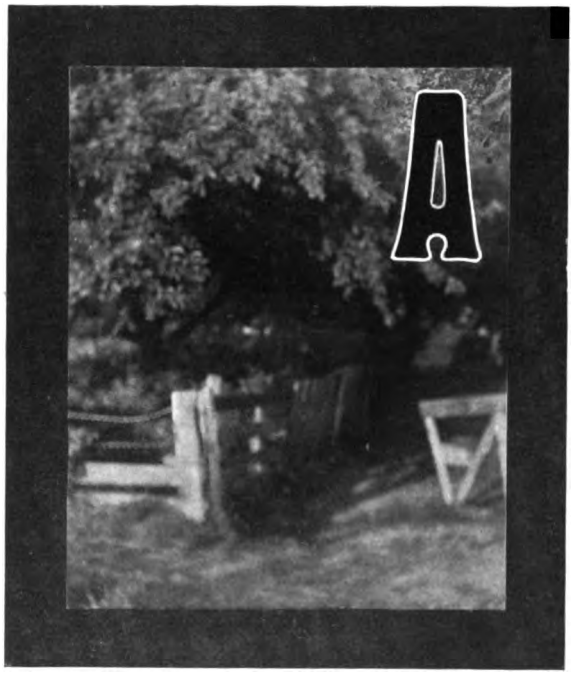
THE AMATEUR AND HIS TROUBLES

Conducted by FAYETTE J. CLUTE

Contributed by Percy D. Booth, Wellsboro, Ind., I. P. A. 1777

TO MAKE A PIN-HOLE LENS



APPROPRIATE two pieces of pasteboard, the size depending upon the diameter of your lens barrel, cut square, but one a trifle smaller than the other. Cut a hole in each about three-eighths of an inch in diameter. Take a piece of thin sheet metal, brass copper or the like, lay it on a piece of wood and with the point of a nail and a hammer make a dent or boss, not punching through the metal. File or grind down this little boss until the metal is very thin at that point. Then push the point of a small needle through about a quarter of an inch. This will give a small hole that, owing to the thinness of the metal, will have but little or no burr and a thin edge, this last being the important part if a fair degree of sharpness is wanted. Cut down the sheet of metal until it is but a little larger than the holes in the pasteboard; glue these two last together with the metal between and place under slight pressure until the glue sets. To use, unscrew the combinations of your lens from their mount and place the pinhole in position in the barrel. Use the largest stop of the diaphragm behind the pinhole and shutter as for time exposures.

TANK DEVELOPMENT

I have a plate tank, but the thermometer is sometimes misplaced or broken, making it impossible to follow directions implicitly. This is the way I work it out. I put the plates in the rack, the rack in the tank and put on the cover and funnel, putting a plate that I know fully exposed on the outside in filling the rack. I then fill the tank with clear water, pour off, put in the developer and when I think the proper time has been given, examine by looking at the outside plates. If these seem fully developed with the shadows well dimmed, I assume that all the plates are developed and find that such is practically always the case. The developer is poured off, the plates rinsed, fixing done, after which they are washed in the tank.

MY WAY OF FINISHING PRINTS

It is very rarely that I have an opportunity of meeting a fellow amateur and for that reason I do not know much about the methods used by others in making their prints. My own way of working may be of interest to other isolated amateurs. In a previous number of CAMERA CRAFT I gave a description of a little bench I use for expos-

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ing the paper by means of an ordinary lamp. This bench has a line on it that is just six inches from the flame of the lamp when the bench is as close to the lamp as possible. I first find the correct printing time for each negative, placing the number of seconds on the negative envelope. If I wish to change to another speed of paper I know the ratio of its speed to that of the paper I always use in making the test to find the exposure time. This last paper may require, for a particular negative, twenty seconds. I know that another particular brand requires one-fourth longer, so that should I want to print on the slightly slower paper I have but to add one-fourth to the time marked on the negative envelope, giving, in the case mentioned, twenty-five seconds. The paper or cards are kept in a light-tight box about ten inches square. When about to do my printing I set up my bench, lamp, box and reflector as shown in the picture herewith. I load the frame in the shadow of the reflector, make the exposure and drop the exposed card or piece of paper back in the light-tight box, it being large enough to contain two boxes of the size being printed, one full of paper or cards and the other empty. One might think there was danger of getting the two mixed, but if the unexposed paper is always kept in the end nearest to hand, it soon becomes second nature to always take paper from that end and put the printed sheets in the small box at the farther end. Having the printing time marked on each negative envelope makes it easy to expose correctly if the lamp is burning brightly. The flame is easily kept at the same intensity by always having the lamp well filled, the wick well trimmed and the chimney clean. Then all one has to do is to turn it just as high as it will burn without smoking. With the knowledge that my prints are all rightly exposed there is no need of developing each print as I go along; in fact, I generally leave that work until another evening.

My developing outfit is about the same as everybody else uses, I imagine. It consists of an enameled tray containing developer as recommended by the maker of the paper I am using, next a tray of clear water, and beyond that a 12x14 tray of hypo, this last made of wood lined with oil cloth. Having difficulty in getting the acid I do not use the fixer recommended, but simply take a glassful of hypo, pour in five glasses of water, and when the first is dissolved add a teaspoonful of powdered alum. I take the ex-

A FLOWER STUDY — By PERCY D. BOOTH

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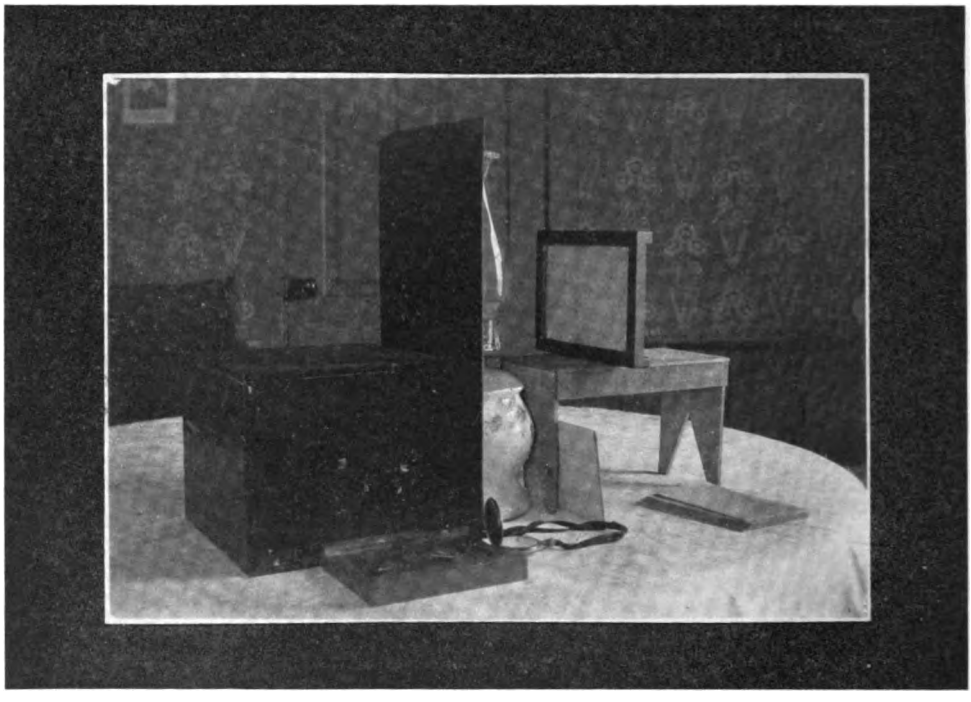
posed sheets or cards, face down, one on top of the other, in a pile at the right of the developing tray, after setting the lamp by the hypo tray and shading it with a piece of card. Moistening the finger tips of the right hand in the developer, I touch the top of the top card, give it a little pull and it slides off the top of the pile where it is picked up and slid into the developer. As soon as the image is fairly out, the second card is slid under it, and by the time the first one is developed this last is in about the same stage as was the first when the second was slipped under it, so the third is introduced, and so on. The print, as it is taken out of the developer, is drained for a minute and dropped into the tray of clear water, where it is picked out by my left hand, placed in the hypo and kept in motion until the next print comes along in its order. Working in this way my right hand never gets into the hypo and the left hand, which does get well soaked in hypo, never gets into the developer. The plan also means speed because one print is always developing out while the next is showing up. If the developer is working slow, three prints can be kept going; if working fast one will be kept busy with the two developing at the same time. After all the prints are in the hypo I transfer them, one by one, to a pile in another part of the tray, then back again, and so on for fifteen or twenty minutes. After fixing they are washed in twelve changes of water for five minutes each time, making a complete change each time, handling them one by one. Each time a change is made and the water poured off I press the pile of prints down in the tray and squeeze out all the water possible. I believe this last is a great help. Anyone knows that a dirty sponge can be quickly cleaned by squeezing it dry and wetting it several times, while soaking in water would do no good. All my prints and cards are dried by spreading them out, face up, on paper and then rolling them straight with a roller, as advised in the circular that comes with the gold post cards put out by the Eastman company. For my negative envelopes I use 4¼ x 9½ manila envelopes, pasting down the flap and then cutting off one end so that they extend an inch beyond the negatives. This extra inch forms a flap on which I write the title of the negative. Storing these on end in drawers, it is easy to find any negative wanted.



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A PHOTOGRAPHIC DIGEST

Edited by H. D'ARCY POWER, M. D., Burlingame, California

ORDINARY NEGATIVES FROM AUTOCHROME AND OTHER SCREEN-PLATE TRANSPARENCIES

Since the introduction of color photography by the screen-plate method much attention has been given to the duplication of the transparencies in colors, either by contact, or, better, by reproduction in the camera, this latter process giving superior results. Although the production of color duplicates is of interest to many workers, it is never likely to be of supreme interest, even to the most enthusiastic autochromists, while we still lack the means of producing such color fac-similes as paper prints. Yet, if we have not at present the means of doing this, we nevertheless are able readily to make from a color transparency a negative which is as suitable for ordinary printing as (or, at any rate, only a little less so) one made direct from nature.

By some it may be thought that such an aim on the part of the color worker is a retrograde one and therefore to be discouraged, but it seems to us that, in fact, it should attract many new workers into the field of color photography. How many amateus indeed there must be who have not thought that it was possible to obtain a negative at home, and at their leisure, from a color transparency, and who have therefore given up the color process, even after having experienced its charms, simply for the reason that they believed themselves compelled to make duplicate exposures on ordinary plates if they wished to obtain prints on paper in addition to their transparencies in color. It cannot be contended, at present at any rate, that color photography by means of screen-plates supplies a complete substitute for ordinary monochrome work. The color transparencies have their use in projection and in the stereoscope, but apart from these particular applications it must be confessed that their field is limited. Thus there is still, and we may say there will always be, a large place for ordinary black-and-white photography, since the number of ways in which it may be used is so great. It is common to meet, even among those most enthusiastic in color work, a firm attachment to ordinary photography, which, we repeat, cannot be actually supplied by the more attractive for more work. The question, therefore, of preparing negatives from color plates is not without interest.

Just as in the preparation of color duplicates, two methods may be followed in producing negatives, namely, by reproduction in the camera or by contact in a printing frame. We will take the former method first, as it is the one which we have chiefly employed. Fearing that the starch grain immediately behind the extremely thin emulsion which forms the image would considerably affect the fine grain desired in the print, we conceived it necessary in the first experiments which we made to prepare the reproduced negative on a scale smaller than that of the color transparency, and this was why we first turned our attention to the camera method of reproduction.

However, having need of a negative the same size as the transparency, we prepared one by copying a 7x5 autochrome transparency the same size. The results obtained were satisfactory, the starch grain being scarcely perceptible even in the uniform portions of medium density, whilst the details in no way suffered. The positive print obtained gave, to some slight extent, the appearance of having been made from a paper negative, although with much finer detail even in the half-tones, the granular structure of the color transparency being considerably finer and more regular than the grain of the paper. A bromide print from a negative prepared from an autochrome somewhat resembled a print by the oil process, or one made through a fine half-tone screen. In short, the definition is amply sufficient.

The production of the negative presents no difficulty. The most simple process is that described below, that is for those who pos-

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sess a double-extension camera with which copying may be done on various scales of reproduction. The transparency to be reproduced is mounted, without its cover glass, to the inside of a window. It is well to use the uncovered transparency in order to avoid reflections which might otherwise be caused by the cover glass and might appear in the negative. In order to secure prints which show the original subject correct as regards right and left, the emulsion side of the autochrome transparency should be placed facing the lens. Outside the window is placed a sheet of ground glass in order to supply a diffused and even lighting over the transparency. This diffusing screen should be placed a few inches behind the transparency in order that it may be well out of focus; it therefore requires to be somewhat larger than the color plate being reproduced.

In obtaining a negative of good quality it is well to place the autochrome in a black frame made either with opaque black paper or card so as to cut off light completely around the edges. This can frequently be done sufficiently well by placing the autochrome in one of the wooden frames sold for display purposes. When using a lens of long focus for a given plate, as also when reducing in scale to a considerable extent, the margin given by the binding of the transparency itself may be sufficient, but in no case should any light other than that passing through the transparency gain access to the inside of the camera through the lens.

It is no easy matter to obtain sharp focus, even with the lens at the full aperture, at any rate in winter. For this reason we advise that focussing should be done before advise that focusing should be done before placing the outside diffusing screen in position, installing this latter just before making the exposure. A further aid to sharp focusing is to oil the ground glass of the copying camera with a little vaseline.

In order to obtain the maximum sharpness in the negative it is best to stop down a little, and to do so has the further advantage of requiring a longer exposure and one, therefore, which can be more readily timed. Exposure is fairly short in spite of the considerable opacity of the screen-plate transparency. When copying same size with the transparency placed in a window facing north we found that from twenty to thirty seconds were required at f-14 on plates of medium sensitiveness, and when working from good brilliant autochromes which had been varnished. More opaque transparencies and those which have not been varnished necessarily require a somewhat longer exposure.

When the originals have received correct exposure and development the negatives show good orthochromatic rendering without the use of orthochromatic plates or compensating light filters. Foliage is excellently rendered, and the different colors of the original are reproduced in their relative values.

Although, as we have said, the making of the negatives in the camera is the better method, yet, as it requires an apparatus of considerable extension it is beyond the means of many amateurs whose equipment is of the most modest kind. The latter may be recommended to work by contact with a printing frame, which method will likewise yield quite good results, in fact even better as regards invisibility of the starch grain.

The autochrome transparency is laid glass side down on a printing frame with a stout plate-glass front. Then in the dark room, illuminated only by yellow or green light, an ordinary negative plate is laid in film to film with the autochrome. A sheet of black paper is then placed on, and finally the back of the printing frame. Exposure is then made at a distance of from eight to twelve inches from an electric or incandescent gas burner. Although the plates usually used for negative making will furnish good results, yet it is better to use a quite slow emulsion, though not one of the chloro-bromide class as sold for lantern slide making, which is apt to give a certain hardness in the negatives. During exposure it is a good plan to keep the printing frame constantly turning (at a slight angle) as though it were pivoted on a vertical axis, the object being to allow the rays of light from the lamp to impinge upon the surface at different angles and so assist in rendering the grain less apparent in the negative.

Nothing need be said as regards development except that the plate should be examined by transmitted light and the developing operation continued until sufficient

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density is obtained to yield prints of the necessary contrast. It is needless to say in conclusion that the methods here described apply equally to color plates made with regular geometrical screen, such as the Dufay dioptichrome or the omnicolore.—V. Cremier, in *Photo Gazette.*

The above paper, translated in the *British Journal of Photography,* is likely to be of use to the increasing number of workers in autochrome and other color plates. The subject is not new, it was dealt with by me shortly after the introduction of the autochrome plate, and I then advocated, as I still do, the making of the negative by means of the carbon process. It more completely eliminates the grain and, I think, gives better color values. I can in no wise agree with Mr. Cremier when he states that, using an ordinary plate, "the different colors of the original are reproduced in their relative values." Such a result is theoretically impossible and practically untrue. An ordinary emulsion is insensitive to red, whether it be light coming through the red granules of the color plate or the red object it portrays. As a matter of fact a bright red rose in nature makes a greater effect than its image on a color plate, for the natural object reflects much white light that is absent from a transparency. Workers who desire correct values (which, by the bye, are not always desirable) should use a Lomiere panchromatic plate and the corresponding screen to cut out the ultra-violet rays. I have made excellent negatives thus: I place an ordinary lantern slide in the enlarging apparatus and, after focusing sharply, bring it out of focus to a slight degree. I then substitute the autochrome and know the exact amount of diffusion it will have (to soften out the granules). With daylight I place the regular autochrome screen over the lens. At night, using electric light, I dispense with a screen, still using a panchromatic plate.

OUR BOOK SHELVES

"PHOTOGRAPHY; ITS PRINCIPLES AND APPLICATIONS"

The above is a handsome, cloth-bound book, lettered in gold, containing over three hundred pages of practical photographic information. In order that the really necessary informative matter might be as complete as possible, the author has wisely left out all mention of obsolete processes that have more of a historical than practical value; and, still more wisely, he has refrained entirely from any discussion of the pictorial aspect of photography. This leaves the author more space in which to live up to the requirements of his title, and we can assure our readers that he has most successfully discharged his obligations. The author, Alfred Watkins, is entirely too well known to need an introduction at our hands. His previous and less important books have enjoyed a surprisingly large sale; his exposure meter, his factorial system of developing, and other devices and methods, are all too widely known to leave any doubt as to the value of a book from his pen. This last book, his most important work, should be in the hands of every photographer. It contains almost one hundred illustrations of the most helpful kind, including a frontispiece in colors, a reproduction of a screen-plate picture. The price of the book is two dollars. It is published by D. Van Nostrand Company, 23 Murray Street, New York.

"LIBRARY OF AMATEUR PHOTOGRAPHY"

This is composed of four volumes, each nine and one-fourth inches high, six and one-half inches wide, and one and one-half inches thick, made up of one thousand six hundred pages of vital photographic ideas, methods and processes. It is a library that contains the "know-how" of the experts, the proved methods that have had the test of time, the "right-ways" that lead to success. This Library of Amateur Photography has been prepared in an entirely different manner from most text books. Each process has been tested and demonstrated by a practical photographic expert. This demonstrator instructs an apprentice while

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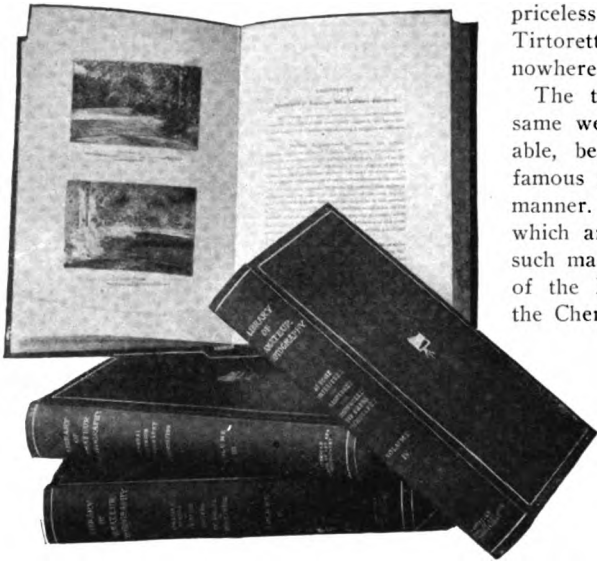
he carries out the work of the particular method or process in hand. A stenographer records his demonstration, as well as the entire conversation between the instructor and the student. This is typewritten, then carefully edited. So you have in these four volumes the most practical form of photographic instruction.



There are over a hundred and fifty chapters, too long a list to give in this notice. Write the publishers for a list, including their special offer of one-third off for immediate orders. Both will interest any photographer who desires to increase his capabilities as a photographer and decrease, or entirely eleminate, waste of material, effort and time in the persuit of his hobby or profession, as he may consider his photography. The publishers are American Photographic Text Book Company, 350A Adams Avenue, Scranton, Pennsylvania.

"THE ART OF THE VIENNA GALLERIES"

The author, D. C. Preyer, says in his little preface: "The wealth of these galleries may be estimated when we consider that the Imperial museum shows over twenty-six hundred paintings, the Liechtenstein over eight hundred, the Academy collection twelve hundred, the Czernin three hundred and fifty, the Harrach almost four hundred, the Schoenbrunn one hundred and fifty and the Lower Belvedere Gallery one hundred—or about five thousand five hundred paintings in all. Many of these are priceless jewels. Titian, Palme, Giorgione, Tirtoretto and some Flemish artists are nowhere so abundantly represented.

The text of Mr. Preyer's book on this same wealth of painting is pleasingly readable, because it tells us much about the famous paintings in a simple, unpretentious manner. And the forty-seven illustrations, which are very well made reproductions of such masterpieces as the Raphael "Madonna of the Meadow," the Titian "Madonna of the Cherries," and portraits by Rubens, Van Dyck and Franz Hals, render the volume beautiful, indeed. It is certainly worth having for all folk who do not lack a sense and love of art. Published by L. C. Page & Company, Boston. Price two dollars; postage sixteen cents extra.

AN ILLUSTRATION FROM "THE ART OF THE VIENNA GALLERIES"

SOME BARGAIN PRICES

From the Photo-Crafts Shop, Racine, Wisconsin, we have just received a copy of their "Bulletin," listing quite a variety of bargains in photographic apparatus and supplies. It also contains particulars concerning their special offers in enlargements.

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INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

THE SOUTH DAKOTA ALBUM

Our first South Dakota Album, which is now circulating among the members for prints, is meeting with good success and I most earnestly ask the support of all South Dakota members. If each one will but keep me always supplied with prints, and keep a a good supply of applications and prospectuses on hand,which I can now supply you at all times, and mail and hand same to amateurs, I will willingly do all I can to boost for South Dakota. But I shall need your support. We have in our State good material from which to make up a fine album, one of which we can all be justly proud. Let's boost, what say you? Let me hear from each South Dakota member.—C. B. Bolles, Album Director, Aberdeen, S. D.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4948 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 1160 Detroit St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NEW MEMBERS.

3098—Mrs. David H. L. Wills, 1227 Cambridge St., Philadelphia, Pa.
3¼x5½, developing paper, of views of interest of Philadelphia and its surroundings, water scenes, landscapes, and high-class speed work, such as auto races, horse races, and aeroplanes. Desire to exchange mostly post cards with young ladies only. Good work for good work; all cards received and sent on approval. Class 1.

3099—J. D. Sellars, Box 208, Hamilton, Mont.
3¼x5½, developing paper, of mountain and country views; for the same. Class 1.

3100—F. M. Philpot, Long Beach, Cal.
4x5, developing papers, of ships and shipping, and views of general interest; for anything of interest. Class 1.

3101—Carl L. Hartshorn, 59 Irving St., West Somerville, Mass.
3¼x4¼, 5x7, 8x10, various papers, of nature subjects, photomicrographs, and landscapes; for the same. Lantern slides only. Class 1.

3102—P. Austen, Pushmataha, Ala.
Class 2.

3103—Frank H. Harvey, Examiner Interstate Commerce Commission, Division of Carriers' Accounts, 1311 G. St., N. W., Washington, D. C.
Class 2.

3104—R. T. Davidson, Perrysburg, Ohio.
5x7, developing papers, of photos; for the same. Class 1.

3105—Kenneth M. MacKinnon, 46 Shepard St., Cambridge, Mass.
3¼x4¼, developing papers, of Harvard College pictures; for public buildings or streets (labeled) in towns and cities. Post cards preferred. Class 1.

3106—A. S. Powers, Hastings, W. Va.
Up to 5x7, various developing papers, of general views; for all views of general interest. Class 1.

3107—P. Birrel, 827 Oliver Bldg., Pittsburg, Pa.
4x5, developing papers, of landscapes and marines; for the same. Class 1.

3108—J. Lee Stocking, R. D. No. 4, Box 29, Painesville, Ohio.
2¼x3¼, 4x5, and 5x7, developing papers, of general views of landscapes, buildings, etc.; for anything of general interest. Desire plain unmounted prints, in mostly 4x5. Class 1.

3109—Richard L. Berger, 26 N. New Jersey Ave., Atlantic City, N. J. Class 2.

3110X—Edwin S. Westlake, Engineer C. A. C., U. S. Army, Fort Hancock, N. J.
Post cards, stereos, 3¼x5½ and 5x7 prints, various papers, of views of old forts, army life, marine views, and landscapes from Maine to Virginia; for views of general interest. Class 1.

3111—C. F. Hodgkinson, Scottsdale, Tasmania, Australia.
Class 2.

3112 R. F. Clark, Box 328, Bishop, Cal.
5x7 or smaller, developing paper; for anything. Class 1.

3113—Albert M. Phelps, Box 180, Templeton, Mass.
Post cards, developing paper, of local and general views in Massachusetts; for marine views and general subjects. Class 1.

3114—J. G. Boyd, 507 Equitable Bldg., St. Louis, Mo.
Class 2.

3115—L. M. Pierce, Box 350, St. Joseph, Mich.
3¼x5½ and 5x7, developing papers, of automobile races, scenery, both water and land, flashlights, and growing fruits; in fact, almost anything; for races of all kinds, trop-

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ical and foreign views or any instructive subject. Class 1.

3116—A. S. Daves, Pomona, Cal.
3¼x5½, various papers, of public buildings, park scenes, and landscapes; for any subject of real lasting merit. Class 1.

3117—Elsie M. King, Box 222, Santa Cruz, Cal.
4¼x6½, developing paper, of landscapes and marines; for the same. Prints or post cards. Class 1.

3118—Edw. W. Cochems, San Marcos, Cal.
5x7, developing papers, of general landscapes, houses, cattle, etc.; for portraits and anything. Class 1.

3119—C. R. Reierson, De Forest, Wis.
3¼x5½ to 8x10, various papers, of landscapes, interiors, and general portraiture; for the same. Class 1.

3120—J. Edward Fitzgerald, Box 11, Washburn, N. D.
5x7 and smaller, various papers, of English views, North Dakota landscapes, and historical views; for foreign views, marine work, scenery, historical, animals, notable persons, buildings, and old ruins. Class 1.

3121—Webster P. Patterson, 2312 4th North, Seattle, Wash.
Post cards, developing paper. Class 1.

3122—Herbert J. Manning, McLaren Vale, South Australia.
6½x4¾, 5x4, and post cards, printing-out and developing papers, of local views, landscapes, beach scenes, flowers, etc.; for anything of interest. Class 1.

3123—Robert Fraser, St. Vincent St., Port Adelaide, South Australia.
Class 3.

3124—C. R. Wentland, Robertsville, Ohio.
Class 2.

RENEWALS.

1795X—Harry Bayly, Burlington, Wash.
3¼x5½, 4x5, developing paper, of landscapes, lumbering, and marine views; for the same. Prints and post cards, good work only. Class 1.

2185X—Gabriel P. Flores, Ph. D., care of College of Physicians and Surgeons, San Francisco, Cal.
3¼x5½ and smaller, various papers, of genre, art studies, and speed work; for anything of interest, but especially art studies and speed work. Post cards and unmounted prints. Class 1.

2361—Eugene Clifford, Weippe, Idaho.
Class 3.

2430—Owens E. Meals, Valdez, Alaska.
Class 2.

2447—Oscar Ulstad, R. F. D. No. 2, Madison, Minn.
Class 2.

2578X—C. R. Lane, Startup, Wash.
3¼x5½, developing paper, prints or post cards. Class 1.

2608—Alfred Gates, Box 93, Treherne, Man., Canada.
Stereos, unmounted. Class 1.

2631—Mrs. H. F. McFarland, Suite 1, The Eastman, Detroit and West 111th Sts., Cleveland, Ohio (formerly Anna B. Darmstatter).
Class 2.

2640—F. J. Soto, Gozos 6, Puebla, Pue., Mexico.
Class 2.

2659X—A. E. Willcutt, Swift River, Mass.
Will be pleased to exchange post cards with those doing good work. Class 1.

2668—W. J. Davis, Box 81, Deary, Idaho.
4x5, printing-out and developing papers and post cards, of woods, streams, and general scenes; for the same. Class 1.

2670—E. A. Doolittle, Box 34, Painesville, Ohio.
3¼x5½ and 4¼x6½, of landscapes, and general views of odd and interesting subjects; for the same. Good work only; prefer cards enclosed in envelope. Class 1.

2685—John H. Rudolph, Diggins, Mo.
5x7, developing paper, of outdoor views, etc.; for post cards of views. Class 1.

2733X—R. H. Appleby, 99 Center St., Santa Cruz, Cal.
3¼x5½, developing paper, of landscapes, water scenes, and other scenes of interest; for principally scenery. Mostly post cards. Class 1.

2768—Emmett L. Lovett, care Stamford College, Stamford, Texas.
(Was Roby, Texas.)
Post cards and 4x5 and smaller, printing-out paper, of views, college scenes, etc. Post cards and prints. Class 1 foreign, Class 2 United States.

2952X—W. G. Conger, Independence, Mo.
3¼x5½ and 4x5, various papers, of street scenes, buildings, parks, fairs, expositions, speed work, night pictures, and copy work; desire Rocky Mountain scenes, Pacific and Atlantic beach scenes, California and Oregon views, and speed work. Will accept any picture, print or post card, provided the work is good. Would like to exchange more with foreign members. Class 1.

2968X—Henry A. Swanson, R. F. D. No. 1, Box 22, Swea City, Iowa.
4x5, 4¼x6½, and post cards, various papers, of landscapes. Post cards only. Class 1.

CHANGES OF ADDRESS.

170—Thos. J. Ronald, Elba, Colo.
(Was Brunker, Colo.)

1618—E. E. Runge, General Delivery, Fresno, Cal.
(Was Trinidad, Colo.)

1818X—Paul P. B. Brooks, Carlinville, Ill.
(Was State Line, Ind.)

1924—E. J. Fox, Sewell, N. J.
(Was Mt. Ephrim, N. J.)

2278—L. T. Neikirk, care of University of Washington, Seattle, Wash.
(Was Boulder, Colo.)

2436—G. M. Thompson, R. F. D. No. 1, West Fork, Ark.
(Was Grapevine, Texas.)

2596—Maurice Windus, Box 194, Pullman, Wash.
(Was Ronan, Mont.)

2638—L. C. Barrett, Boise, Idaho.
(Was Baker City, Ore.)

2663—R. A. Hayes, Eddyville, Iowa.
(Was U. S. S. South Dakota, via San Francisco, Cal.)

2690—Bartlett Johnston, R. R. No. 6, Box 88, Santa Rosa, Cal.
(Was General Delivery.)

2692—Henry Herdeman, 588 64th Ave., West Allis, Wis.
(Was 606 68th Ave.)

2857—I. Kuhn, 445 West 153d St., New York.
(Was 562 West 164th St.)

2867—Miner W. Tuttle, Box 111, Amherst, Mass.
(Was Crawfordsville, Ind.)

2882—Henry C. Addison, 1977 N. 5th St., Kansas City, Kan.
(Was 2005 No. 5th St.)

2896—H. F. Albert, care Careyville Coal Co., Careyville, Tenn.
(Was Newcastle, Wyo.)

2920—C. M. Bleyer, Easton, Pa.
(Was Chicago, Ill.)

2941—Haskell R. Koons, General Delivery, Biloxi, Miss.
(Was Canton, Ohio.)

2953X—H. J. Hughes, 2024 Franklin Ave., Seattle, Wash.
(Was 3919 Boylston, Mo.)

3018—F. D. Cargin, 339 2d Ave. W., Cedar Rapids, Iowa.
(Was Marcus, Iowa.)

3064—Edwin F. Robac, care Tamp[illegible] Co., Tampa, Fla.
(Was South Tampa, Fla.)

WITHDRAWALS.

2076—H. J. Becker, C. R. B. C., Cedar Rapids, Iowa.
(Was Cascade, Iowa.) Wishes to withdraw for about one year on account of lack of time.

2999—A. W. French, Cristobal, Canal Zone.
(Was Ancon, Canal Zone.) Wishes to withdraw on account of change of station and being without facilities for photo work.

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NOTES AND COMMENT

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest

A CATALOGUE "WORTH WHILE"

There is a new catalogue of Goerz lenses that every user of a lens should have. It is jammed full of valuable information concerning lenses and their functions and their capabilities. In fact, it contains a wealth of information such as we are called upon to furnish our correspondents every day in the week. Such topics as Depth of Field, Speed of Lenses, Focal Length of Lenses, and the like, are discussed and explained in the fullest possible manner. Be sure and send for one of these new catalogues, addressing, C. P. Goerz, American Optical Company, 317 East Thirty-fourth Street, New York.

REPORTED BY WILLIAM WOLFF

Mr. and Mrs. Tucker, of San Jose, have just returned from a most enjoyable auto trip through the southern part of the State.

C. C. Green, of Marysville, reports that what is apparently a Christmas rush is already on at his studio.

George Wilcox, a former San Francisco photographer, but now of Ukiah, has just finished his sixth bungalow. Business must be good in the north.

Frank Brown, a former printer at the old Elite Studio in San Francisco, is again in town, having been operating for some of the largest studios in Boston the past six years.

Gatlif & Thompson, of Eureka, have made some extensive alterations and improvements in their studio, which now ranks with the best in the lesser cities.

Mr. Cuthbert, the popular Portland photographer, was married in Oakland, October twentieth, to Miss Muriel Christian, a charming young lady of that city.

DELAY MEANS LOSS

The dark, short days are coming on, the days when it is not unusual to have to refuse sittings or decline orders through lack of light, or else fail to secure good results through undertimed negatives. Look up the advertisement of the Portable Skylight on another page and write the Schoberg Company for descriptive circular. Their machine created great interest at the National, the Nebraska, the Illinois, the Iowa and the Missouri conventions, where daily demonstrations were given, using three and four grains of powder for 8x10 negatives. At all of these conventions a number of orders were placed, particularly at the Pacific Northwest convention at Tacoma. The machine was chosen to take all the booths at the National, where many leading photographers placed orders, including two for Rudolph Duhrkoop and his daughter of Germany. The makers offer to place the Portable Skylight on fifteen days' trial, so that intended purchasers can feel assured of their confidence in this excellent piece of apparatus. We have heard from several users who praise it in the highest terms as a maker of new business, and profitable business at that. Do not delay, but write at once for illustrated descriptive matter which the makers are glad to send.

A CATALOGUE—AND MORE

All catalogues contain some information, but some contain more than others. The new Graflex catalogue contains about the most we have ever found in any one booklet of the kind. And it is more than the usual cut and dried information; it is the kind that is made perfectly clear by a series of illustrations. There are about two dozen series, some showing the effect of over, under and correct exposure, some the result of different stops, others the result of different distances, and so on through a long list. As all details are given, the series form an excellent guide for correct exposure, right selection of stop, speed necessary to stop various motions, and so on and so on, through a long list. It is a book that all camera users should have. And do not run away with the idea that the information is only useful to the beginner. It contains a table that shows the worker

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just what depth of focus his lens will give with any stop and with any selected focus point. Only today we were enabled by means of the table, to give an old professional just the information he wanted in finding out, beforehand, just what lens and stop he would have to use in making a flashlight of a banquet tonight. Copies may be obtained by our readers free of cost upon application to the Folmer & Schwing Division, Eastman Kodak Company, Rochester, New York.

OF INTEREST TO THE PROGRESSIVE PROFESSIONAL

If there is one man in this country that keeps himself posted on all the improvements and all that is new in professional photography, that man is "Daddy" Lively, or, if you prefer, Professor W. S. Lively, President of the Southern School of Photography. He has been attending all the conventions, and has taken an active part in many of the demonstrations. If there is a man who can post up the enterprising professional who wishes to keep abreast of the progress in his business, Mr. Lively is the man. He announces that there will be held at the school, during the month of February, a special post graduate course for the benefit of professionals. Write at once and find out all about it. We have heard from several of our professional readers who have taken advantage of these special courses in the past, and they all speak of them in the highest terms, two of them spending a month at the school each year. The change of scene, the valuable instruction, the low cost of it all, combine to make the proposition a most attractive one. Address. Southern School of Photography, McMinnville, Tennessee.

THE ILLINOIS COLLEGE

The October enrollment at the college was a large one, including students from nearly every section of the United States and the following names from abroad: M. Hirasaka, J. Santiago Castillo, S. Masuda, Anton Zmuda, F. Muramoto, Carlos Morales, Ivan Rein and Hong Lee.

Mr. and Mrs. Shoberg of Sioux City, Iowa, visited the college last month, and Mr. Shoberg gave a very successful and interesting demonstration on the Portable Skylight, of which he is the inventor.

CROWDS FILL "OWL" STORE ON OPENING

Manager L. A. Gros, of the Sacramento store of the Owl Drug Company, Ninth and K Streets, was on deck recently, and in full charge of the company's newest and best store. Manager Gros said that the opening at Sacramento surpassed any that has heretofore been held on the Pacific Coast. The number of persons passing through the doors of the store during the opening and closing hours of Saturday went over the twelve thousand mark, and three times the doors of the store had to be closed.

The management of the Owl said that many more persons would have visited the establishment had there been facilities for handling them. The company gave away nine thousand three hundred boxes of candies with as many twenty-five cent purchases, and innumerable gold-plated pins for young girls. The candies represented a shipment of thirty-five large cases.

A special train of members of the Todco Club (initials for The Owl Drug Company) arrived in this city yesterday morning, and were entertained throughout the day by the local management—Sacramento *Bee*, October 23, 1911.

LARGER QUARTERS NECESSARY

Otto Goerz, who opened an independent photo supply house at 39 West Forty-second Street, New York, about a year ago, has already found it necessary to move to more suitable quarters, at 501 Fifth Avenue, where he will gladly welcome his patrons and friends. Mr. Goerz carries a complete line of photographic supplies and makes a specialty of high-grade European outfits.

PANEL STYLE MONOTONE CARDS

We have been favored with some fine samples of these new cards, and they are indeed such as should have a good sale in any locality. The picture is elliptical in form, surrounded by a handsome picture-frame effect, and as the surface has a fine matte, they are, to all appearances, good photographs on matte surface cards. Thousands of our readers have a number of negatives of local views that would be quite salable made up in this form. These cards can be made from any good photograph, delivery made in three weeks or less, and the price is most tempting. They are made to order

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by the E. C. Kropp Company, of Milwaukee, Wisconsin, a large firm of perfect reliability. Write them for samples and prices before the matter escapes your mind. Their advertisement will be found on another page of this issue.

THE BISSELL COLLEGE OF PHOTO-ENGRAVING

The students have organized a permanent athletic club, and have started with a good, strong membership. They are fitting up a gymnasium downtown for winter work and are looking forward to some good indoor sport.

Ernest E. Jones and Victor Gabel have returned to finish their courses, after a vacation during the summer. We also received a pleasant visit from Edwin Mitchell, student of 1906, who is working at the engraving business in London, Ontario, Canada.

THE GUNDLACH-MANHATTAN CATALOGUE

Our readers should send for a copy of the latest catalogue of the Gundlach-Manhattan Optical Company. It tells why Korona Cameras are what they are, and it tells what it means to have them as they are. It tells you about the Turner-Reich lens and does it all in a modest fashion that is quite gratifying in a catalogue. A large number of particularly fine photographic utilities are listed with full description, and some of the cameras and lenses are of such special construction that reading about them is quite an educational process. Write them for a copy and ask them for the name of the nearest dealer handling their fine line. You will want to look over one of their cameras after getting the catalogue. Address, Gundlach-Manhattan Optical Company, Rochester, New York.

PROJECTING APPARATUS

We have just received a copy of the handsome new Bausch & Lomb Optical Company's catalogue of Projection Apparatus, a catalogue of particular interest and value. Recognizing the growing importance of optical projection in education the firm has devoted a great deal of scientific and productive energy to this branch of their industry and they believe that the results will speak for themselves. Besides valuable introductory matter in the form of general information and tables for reference purposes, the reader will find, in this catalogue, a list of their complete line of Balopticons, or high-grade projection lanterns, and projection accessories fully described. Every known form of optical projection has been provided for. Several new features have been introduced until no more extended or scientifically efficient line of projection apparatus, they believe, is manufactured in the world. Those of our readers who are interested in projection apparatus can secure a copy of this catalogue by addressing: Bausch & Lomb Optical Company, Rochester, New York.

WILKES-BARRE CAMERA CLUB

The Wilkes-Barre Camera Club announces its Eleventh Annual Exhibition, entries closing January fifteenth, 1912. The high standard set by this Club makes it one of the most important exhibitions of this country. It has always been well supported by the serious workers, for the reason that artists of national fame compose the jury of selection. Entry blanks will be sent only to those who apply to R. S. Kauffman, Wilkes-Barre, Pennsylvania.

ST. LOUIS R. R. Y. M. C. A. CAMERA CLUB

When the first set of slides sent out by the Lantern Slide Division of the International Photographic Association reached Mr. Peters in St. Louis, he made arrangements to show it at the Railroad Young Men's Christian Association rooms, invitations being sent out to members and their friends. Quite a gathering resulted and the slides were enjoyed by all. After the meeting, a few remained and talked over the formation of a club, resulting in, a few weeks later, another meeting at which an outing was arranged. A second outing and other meetings followed, the last meeting resulting in a permanent organization with the following officers elected: President, P. B. Speed; Vice-President, O. C. Kuehn; Secretary-Treasurer, O. C. Keil, and Corresponding Secretary, A. C. Williams, Twentieth and Eugenia Streets, St. Louis. The club desires the co-operation of dealers and manufacturers in the giving of demonstrations

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and lectures, and also desires any and all photographic literature and catalogues for its reading tables and library shelves: Mr. Williams, as above, being the officer to address. The club numbers several active lantern slide workers, and will make a feature of demonstrations and lantern exhibitions. New names are being added to the roll at every meeting, and it is expected that the club will shortly be equipped with an operating room and other facilities possessed by only the larger and most popular camera clubs in the country.

AN INTERESTING DEMONSTRATION

The Franklin Institute recently enjoyed a demonstration of the Multi Speed shutter, a demonstration witnessed by the largest and most enthusiastic photographic gathering in the history of the Institute. No piece of photographic apparatus has ever interested and surprised the learned members of the Franklin Institute so strongly as did the practical demonstration and lecture pertaining to this remarkable shutter. Gustav Dietz, the inventor, photographed at the

A FLASHLIGHT GROUP PICTURE

Bell of the photographic department, kept Mr. Dietz busy photographing their numer-

THE ENTIRE AUDIENCE.....CLAPPING HANDS AND EXECUTING OTHER MOVEMENTS

meeting objects in motion, the exposures ranging from 1-200 to 1-1500 of a second, and then used these very pictures in lantern slides which were thrown on a screen before the gathering.

A flashlight group picture reproduced herewith, composed of Miss Mary Carnell, L. J. R. Holst, E. Goldensky and Alfred Holder, presented an interesting gathering. Athletes from the Wanamaker staff, provided by Mr. ous stunts in mid-air. The entire audience of over five hundred people was successfully photographed while clapping hands and executing other movements.

Many requests for similar demonstrations of the Multi Speed Shutter have been received, and Boston, Buffalo, Chicago, St. Louis and other cities will next be in line for these demonstrations of surprising speed and flashlight photographic work.

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CAMERA WANTS

Advertisements of the nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra. These of positions wanted inserted free. No business advertisements will be accepted.

POSITION WANTED As operator, 3 years of successful operating, out of doors. Willing to go to any part of the world; young, self-confident, and reliable. Concerns offering a steady position and good pay for expert workman will do well by writing to Graflex Expert, care "Camera Craft," San Francisco, Cal.

POSITION WANTED By an artistic operator; is competent to take full charge or would hire a studio in a live town where there is a demand for good work at fair prices. Can retouch, print, work in crayon, pastel, and water colors. At present is in charge of a studio in California, but wishes to change where he can improve his position. Address E. F. C., care "Camera Craft," San Francisco, Cal.

FOR SALE A No. 8 Cirkut outfit and one 8 ft. by 6 in. Cirkut printing frame. Has been used several times, but otherwise like new. Worth $185.00; will sell for $135.00. Guaranteed a first-class bargain. Wm. F. Uhlman, St. Joseph, Mo.

FOR SALE A one-room, ground-floor studio, 10x20, located on main street in one of the liveliest towns in S. D. Doing good business. Building and fixtures for $125.00 cash; no rent to pay. Address Y. C. S., care "Camera Craft," San Francisco, Cal.

FOR SALE Studio in Denison, Texas. Doing good business. Reason for selling, desire to locate in California. Cheap and a good opportunity. Write for particulars to C. A. Hoffman, Denison, Texas.

WANTED TO BUY Graflex 5x7, without lens, in good condition, or Century Grand Senior special without lens, 5x7. State lowest prices for cash. Address Joe Knast, Champaign, Ill.

FOR SALE Ground-floor studio in city of 7,000; twenty other towns to draw from; hub of the Willamette Valley; town booming. Fine skylight, city water, two telephones. Good business, new outfit. Reason for selling, have asthma and must seek a higher altitude. Address Photographer, 120 Second St., Albany, Ore.

FOR SALE Photo postal studio. Best equipped in San Francisco. Located in busy section of city. Doing a good business; long lease. Owner too busy to give personal attention only reason for selling. Will take $350.00. Address L. L ., care "Camera Craft," San Francisco.

WANTED TO BUY A studio in Portland, Seattle, or Spokane, about Feb. 1, 1912. Address B. D., care "Camera Craft," San Francisco, Cal.

WANTED TO BUY A second-hand 3A Graflex with or without lens. Send description and price to C. H. Benton, Room 238, Board of Trade, Bldg., Kansas City, Mo.

FOR SALE Goerz Celor lens lists $127.00; 8x10 camera, all improvements, splendid outfit, professional or amateur, cost recently $165.00, $90.00, easy payments if desired. Can be seen at "Camera Craft" office, or write Mitchell, care "Camera Craft", San Francisco, Cal.

POSITION WANTED By young married man, as developer and printer at moderate salary; or will go in partnership with right party in photo business; active, sober and industrious. Address H. L. Van Epps, Arlington Heights, Ohio.

FOR SALE A studio, first class in equipment, location and business, in Northern California city of 6,000. Doing more than $300.00 a month and worth double the price. A pick-up for some one. Price $700.00, and please do not answer if you have not the price. Address O. F. B., care "Camera Craft," San Francisco, Cal.

FOR SALE January 1st, first-class studio, Houston, Texas, population 90,000; doing largest portrait business in city, catering to good medium and high-class trade; fitted to 11x14, new Century studio camera, three portrait lenses, including a 3A Dallmeyer studio; located in heart of business district. Must retire from profession on account of other interests requiring entire attention. Price $1200.00 cash. D. W. Zintsmaster, care Rembrandt Studio, 903½ Congress Ave., Houston, Texas.

FOR SALE Almost new 6½x8½ 1C Tessar lens; covers 8x10 fine, 10-inch focus. Cost new $116.00, a bargain. Address Tessar, 1724 Sanchez St., San Francisco, Cal.

POSITION WANTED By experienced all-around photographer, retoucher and good color artist. Can do oil painting, water coloring, air brush work and pastels. Address Artist, 800 Edgeware Road, Los Angeles, Cal.

AN OPPORTUNITY Do you, on account of ill health, desire outdoor work to avoid the confinement of the studio? Being a physician and desirous of locating in another town, I will sell my place. House and lot in one of the finest parts of the city; population 1,600, with fine surrounding country. Horse and buggy and lots of negatives for re-orders. Will sell with or without cameras. A rare chance for some one wanting only outside work. Get busy. Address N. N., care "Camera Craft," San Francisco, Cal.

POSITION WANTED As blue printer or blue print paper coater. State wages, etc., in first letter. Address Blue Print, Box 47, Schuyler, Pa.

FOR SALE Auto Graflex 4x5 with or without Carl Zeiss lens, F-5, magazine and carrying case. All excellent condition. List $135.00. V. A. Wood, Ridgefield Park, N. J.

TO TRADE A 1A special Kodak, anastigmat lens, compound shutter, only used a few times; want 5x7 or 5x8 lens and shutter. W. H. Jones, 1103 Broadway St., San Diego, Cal.

POSITION WANTED Permanent, as printer and finisher. Am competent to help in all departments. Address Miss A. Guernsey, Rockford, Iowa.

FOR SALE 5x7 Centaur Series III lens, in Bausch & Lomb Automatic Shutter, (regular Century equipment), practically new. Price, $12.00. J. W. Holt, 528 Worcester Bldg., Portland, Ore.

WANTED Long focus camera; also anastigmat lens, focal plane shutter, telephoto attachment, wide angle lens. Send full description and price to Rod Gallie, Box 451, Little Rock, Ark.

FOR SALE Ground-floor studio, single-slant north light. Fitted up to 8x10. Electric light, water works and steam heat. City of 2,000 and a rich farm country. Located about 50 miles southwest of Minneapolis. Will sell outfit and rent building if party prefers. Reason for selling, wish to retire from business. "A. H. D.," care "Camera Craft," San Francisco, Cal.

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CAMERA WANTS—Continued.

WANTED TO RENT Studio and buy outfit in good live town of 1,200 or over, without competition; Iowa, Nebraska, South Dakota or Southern Minnesota. Address George A. Williams, Correctionville, Iowa.

HELP WANTED Photographic assistant, all round worker, competent and of good character; references desired. Communicate with C. A. Nelson, Box 592, Bakersfield, Cal.

FOR EXCHANGE A fine old French violin (D. Nicolas) to exchange for high-grade anastigmat lens, 6½x8½ or 8x10. Address A. S. H., care "Camera Craft," San Francisco, Cal.

WANTED TO BUY A studio in western or northern part of Oregon, in town of not less than 2,000 population. Give full particulars to Chas. L. Nelson, Box 444, Madelia, Minn.

FOR SALE Studio in a busy British Columbia city, where prices are not cut to pieces; rents fairly reasonable and living is worth while; requires $1,600 to handle this. Particulars from N. K. H., care "Camera Craft," San Francisco, Cal.

FOR SALE A 3¼x4¼ pocket camera, 1910 model, fitted with a Goerz-Dagor lens and Volute shutter; perfect condition, never been used; list price, $67.50; will sell for $50. Wm. F. Uhlman, 716 Francis St., St. Joseph, Mo.

POSITION WANTED By artist; bromide enlargements painted in oils; air brush, water colors, pastels; experienced all round operator and retoucher. Address Artist, 800 Edgeware Road, Los Angeles, Cal.

FOR SALE Complete set (10 volumes) Self-Instructing Library of Practical Photography, green cloth, perfect condition; $16. Walter A. Nelson, Ryegate, Vt.

FOR SALE Or exchange, two view cameras, one 8x10 and one 4¼x6½, both complete; a bargain. Write for full descriptions and prices. M. D. Sloat, 1306½ Pacific Ave., Tacoma, Wash.

FOR SALE Large studio fitted to 20x24; operating room, 24x40 ft.; doing a business of about $3,000 a year in Salem, Ore., a city of about 18,000. Address P. H. W., care "Camera Craft," San Francisco, Cal.

WANTED A set of "Complete Self-Instructing Library of Practical Photography." State condition and price to O. H. Hornung, Alcatraz Island, Cal.

FOR SALE Cheap one 8x10 Wizard view camera, with Turner-Reich series II lens F:6.8, case and two plate holders; first-class condition. Also Hall Diamond camera, latest model. F. C. Waters, 661 Madison St., Syracuse, N. Y.

FOR SALE 5x7 Pony Premo camera, model 7, fitted with Planatograph lens and double valve, automatic shutter, leather carrying case, six plate holders, portrait attachment, ray filter, tripod; all in perfect condition; first reasonable offer takes it. See Premo catalog for description. W. C. Ahrens, Box 805, Tucson, Ariz.

FOR SALE Either or both of my studios in Seattle and Tacoma. Good proposition, as I wish to retire from the business. E. A. Lynn, 1108 Pacific Ave., Tacoma, Wash.

POSITION WANTED In first-class studio as operator and retoucher; salary $25 per week; twelve years' experience in leading studios. W. W. Brady, 1211 Carroll St., Boone, Iowa.

WANTED TO BUY A studio in a good town not less than 3,000 population; price not to exceed $300; must be fully equipped. Address M. N. B., care "Camera Craft," San Francisco, Cal.

FOR SALE Photographic studio, central, ground floor, location in Sacramento, north light; $800, terms. 1007 K St., Sacramento, Cal.

A LIVE WIRE The only studio in town of 6,000, on ground floor, established 8 years, doing about $5,000 a year; will sell at invoice. Will pay for itself in a few months. A chance for a live one to get a choice location in California. Am compelled to sell on account of eyesight; have worked 28 years at the business. We have the finest climate, no snow, best town, cheap rent, choice location, top prices, equipment complete, everything just right. Terms given. You must act quick. Address, Photo Emporium, Watsonville, Cal.

POSITION WANTED By first-class experienced lady retoucher as retoucher or general assistant in good studio. Address C. C., care "Camera Craft," San Francisco, Cal.

POSITION WANTED The managing operator of a well-known studio wishes to find a good position in a first-class studio in the West or Southwest. Coast States preferred. Is a high-class workman of long experience, sober, and an educated man. No offer under $35 per week considered. Address C. M., care "Camera Craft," San Francisco, Cal.

FOR SALE A good photo business; ground floor; new building; city water; everything up-to-date; only studio in town of 1,000; will sell cheap if taken before December 1st; reason, other business takes my time. Address, "D. B.," care "Camera Craft," San Francisco, Cal.

POSITION WANTED Steady, all-around man. For further particulars address Box 6, Buffalo, Minn. G. Ternberg.

PRINTER WANTED On developing paper; prefer young lady, and one who can assist operating, etc. Address, A. A. Richardson, Bemidji, Minn.

WANTED TO BUY Or rent studio in town of 4,000 or more, or want position with good photographer. Address, W. H. Stoll, 357 South Fifth Street, Effingham, Ill.

FOR SALE Studio fitted up to 8x10 size; will sell very reasonable; no opposition; ill health cause of selling. For particulars address Box 63, Hayward, Cal.

FOR SALE Leading studio, progressive city of 12,000; new brick building, business center; rent, $35.00; lease to January, 1915, renewable; operating room, 30x40, others in proportion; all steam heat; business 1910, $3,500.00; enjoys patronage of leading people, and Vancouver Barracks adjoining; invoices over $1,600.00; fitted complete to 8x10 portrait and view; refused $1,500.00, but protracted illness compels sacrifice at $1,000.00; plans, photos, full particulars to those meaning business. Address, W. G. Emery, Vancouver, Wash., U. S. A.

FOR SALE Photo supply business in large Colorado city; Eastman line, largely amateur; fine location and good kodak finishing trade. Address, Sam, care "Camera Craft," San Francisco, Cal.

FOR LEASE Or sale on terms, my well-equipped studio, doing good business; no competition; town 6,000 population. Write Timmons' Studio, Stamford, Texas.

FOR SALE One of the finest studios in Southern California; best location in beautiful Pasadena; population, 35,000; price, $2,000.00 cash; less than invoice. Address, Box 771, Pasadena, Cal.

POSITION WANTED By Japanese; first-class photographer wants position as all-round workman in first-class studio; will go anywhere. Address, Photographer, 1712 Sacramento Street, San Francisco, Cal.

FOR SALE 8x10 view camera fitted with No. 6, series II Collinear lens; 9 plate holders; a splendid outfit in first-class condition; cost $150.00; $85.00 takes it. C. D. Robinson, 307 N. First Street, San Jose, Cal.

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CAMERA WANTS—Continued.

FOR SALE Ground-floor studio with living room; in growing Iowa city of 1,000. Studio all up to date, ready to go to work; also framing business; large stock on hand. Will sell cheap if taken immediately. Reason for selling must go West. Address "B. H.," care "Camera Craft," San Francisco, Cal.

FOR SALE The only photo studio in a good Iowa town. Fitted to 8x10. Good country to draw from. Sixteen miles to nearest competitor. Also a good framing business. $350.00 cash takes it. Good reason for selling. A bargain for some one. Address "W. H. D.," care "Camera Craft," San Francisco, Cal.

FOR SALE Cheap, only studio in a good Minnesota town of 1,200; fitted to 8x10, with good lenses. Low rent, living rooms in connection. A snap for some one. Reason for selling, am going out of business. Must sell before January 1st. Call or write to Joe Miller, Jordan, Minn.

FOR SALE Before Christmas, best studio in town of 5,000, in Southern Minnesota. Address C. A. Schlotzhauer, St. Peter, Minn.

FOR SALE The largest and best equipped studio in State of Montana. Ground floor. Population 60,000. Act quickly. Reason for selling, have other interests. Terms. Doing an excellent business. Address P. O. Box 649, Butte, Mont.

FOR SALE Studio in Southern Minnesota. Population 2,000. Only studio in town. Studio fitted up to 8x10. Reason for selling, other business that requires my attention. Will sell cheap if taken for cash. Address "C. S. C.," care "Camera Craft," San Francisco, Cal.

FOR SALE A studio located in a county seat in South Dakota. Equipped with a complete 8x10 outfit. A large territory to draw from. Will sell cheap if sold at once. Reason for selling, am engaged in other business. Address "X. Y.," care "Camera Craft," San Francisco, Cal.

FOR SALE Fine farm of 120 acres. Has a new house 16x24 with four rooms, and a nice barn 20x30. Six acres under plow. The rest all timber, such as oak, birch, elm, basswood and ironwood. Located in Elm Dale township, Section 30, and Morrison County, Ask $25.00 per acre, but would trade it for a first-class studio in Minnesota; prefer Southern Minnesota. What have you to exchange for this farm? Address "W. G.," care "Camera Craft," San Francisco, Cal.

POSITION WANTED As retoucher, operator or general assistant; references; prefer Pacific Coast city; wages, $20.00 per week. Address, Miss A. Logan, 1928 E. Third Street, Spokane, Wash.

STUDIOS FOR RENT Or sale in Central California; direct from the owner. W. B., care "Camera Craft," San Francisco, Cal.

AN EXCELLENT CHANCE For a good man with a small capital to buy a good paying photographic business in a growing West Montana town of 4,000 inhabitants. For particulars address "Opportunity", care "Camera Craft", San Francisco, Cal.

FOR SALE Photo studio in one of California's best cities of 40,000 population. Very low rent and long lease. Conditions ideal and a real bargain. Address B. B., care "Camera Craft," San Francisco, Cal.

FOR RENT A studio at Delmont, S. Dak., with privilege of purchasing. Studio outfit if preferred. Fitted up to 8x10 for in and out-door work. First-class equipment. A very good opportunity for a young man. For particulars, write Jacob Niedan, owner, Valparaiso, Ind.

FOR SALE Circuit outfit No. 8, equipped with B. & L. Zeiss, Protar, series 7A No. 12 lens, as listed in Century catalog at $283.00; this camera has been used less than a dozen times, and is as good as new; will sell this outfit complete for $195.00. Address, J. E. Stinson, Box 444, Jacksonville, Fla.

FOR SALE Photo studio, ground floor, ground-glass light, rent $10.00, population 2200, three small towns to draw from, nearest competition 50 miles. For particulars address E. A. Myers, Malad, Idaho.

POSITION WANTED Expert retoucher will be at liberty to take a permanent position by January 1st or 15th; best references furnished; salary, $25.00 per week; Address, Miss Ada Adams, Houston, Texas.

FOR SALE A 5x7 stereo Century Grand, fitted with compound shutter, Zeiss Protar series VIIa lenses, also focal plane shutter; outfit is almost new; write for particulars. Marsh-Girvin Co., 712 Market Street, San Francisco, Cal.

FOR SALE Studio, ground floor, main street, controlling all the high-class trade in the city and surrounding territory for years. Only cash buyers need answer. Address Studio, 126 4th St., Clarksburg, W. Va.

WANTED TO BUY A studio in California, at once. Must have a paying business, good reputation and lease. Address M. E. R., care "Camera Craft," San Francisco, Cal.

FOR RENT $20.00 month. Fine large studio within block of University entrance; fine facilities for display. George Thompson, 2151 Center St., Berkeley, Cal.

FOR SALE One 5x7 Korona View, Turner Reich anastigmat 6x8 series II convertible lens, and one wide-angle lens, tripod, six adjustable holders. List $93.00, nearly new, for $60.00. Also one 11x14 camera with 3 holders. J. M. Allion, Fayette, Ohio.

RETOUCHING For the trade; first-class work guaranteed; prompt service. Mrs. G. Williams, 10 Third Street, San Francisco, Cal. Phone Sutter 1808.

POSITION OPEN To a lady for reception room work; one who is able to retouch preferred. Address, C 25, care "Camera Craft," San Francisco, Cal.

POSITION WANTED By all-around man; good retoucher; can handle all branches; prefer North Dakota or Minnesota. Address, "M," care "Camera Craft," San Francisco, Cal.

FOR SALE Only studio in Southern Minnesota town of 1,500; studio fitted up to 8x10; will sell cheap on account of other business. Address, "C. J. D.," care "Camera Craft," San Francisco, Cal.

POSITION WANTED In or near San Francisco or Los Angeles, by A No. 1 finisher, art and air brush worker and retoucher; also reception room experience; best of reference. Address, L. J., care "Camera Craft," San Francisco, Cal.

CAMERA DOCTOR

G. E. BIDDELL - The Camera Doctor

All kinds of photographic apparatus made, renovated and repaired : :

693 Mission St. Cor. 3rd - San Francisco

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Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

KODAK DRY MOUNTING TISSUE.

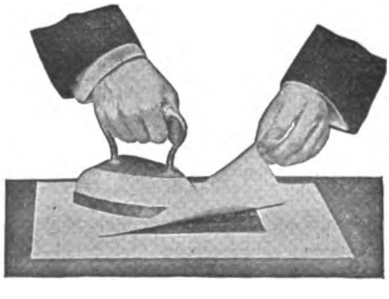
You have prints of your Summer vacation to mount in your album—prints to be mounted on attractive cards or calendar mounts for Christmas or New Year remembrances and in many instances the mount or album leaf is thin and consequently curls readily with the ordinary wet paste.

Kodak Dry Mounting Tissue is not only cleaner and more convenient to use but will not buckle or curl the thinnest mount. It is ideal for album mounting for most all leaves are made of thin mounting paper and the leaves lie perfectly flat when the prints are mounted with dry mounting tissue.

The tissue is put up in convenient packages for the various sizes of Kodak prints and requires only the use of a hot flat iron for mounting. Lay a piece of tissue on the back of the print to be mounted. touch with the point of the iron to tack the tissue to the print, lay the print on the mount or album leaf, cover with a blotter and press with the hot iron as shown in the illustration, when the whole print will firmly adhere to the mount.

THE PRICE

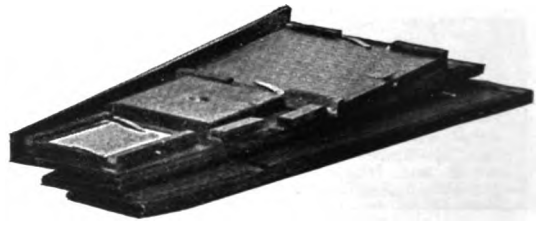
Size 3½ x 3½	- 3 dozen	-	$ .10
" 3¼ x 4¼	- 3 "	-	.10
" 3¼ x 5½	- 2 "	-	.10
" 4 x 5	- 2 "	-	.10
" 4¼ x 6½	- 1 "	-	.10
" 5 x 7	- 1 "	-	.10



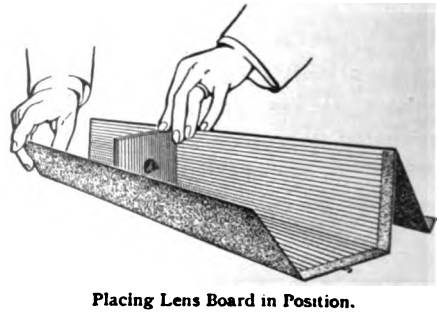
ENLARGING MADE EASY.

You have all wondered at the beauty of enlargements from small Kodak negatives—some of you have had enlargements made from your best negatives and still others have made them yourselves. The greatest pleasure is in the making of ones own enlargements but many of us have not the facilities for doing the work.

The Brownie Enlarging Camera solves the problem for those who are unable to use the old method. This convenient little enlarging cone will make perfect enlargements of given sizes almost as easily as making direct Velox prints and either Velox or Bromide papers may be used.



The Brownie Enlarging Camera is packed flat in a box and may be quickly set up ready for use. It consists of a cone with a frame at either end, the small one for holding the negative and the large one the sheet of Bromide or Velox paper.



Placing Lens Board in Position.

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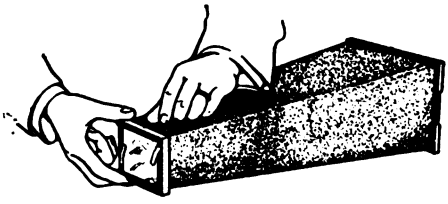
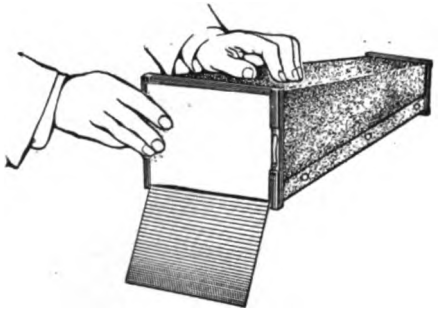
Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



Negative Holder in Position,



Frame for Holding Velox or Bromide Paper.

No focusing is required. The lens board containing the lens is simply inserted in the slot provided for it and the sides of the camera are then folded around this board forming the cone. The frames are fastened on either end and the camera is ready to use.

Brownie Enlarging Camera showing the position of negative, lens and Velox or Bromide paper.

The instructions for using the Brownie Enlarging Camera are very simple and the results are the best.

Your dealer will show you these cameras and explain their operation.

THE PRICE

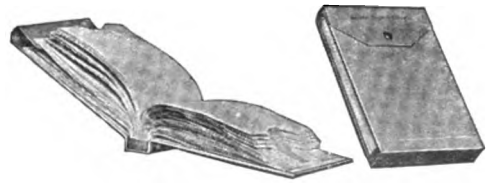
No. 2 Brownie Enlarging Camera, for 5 x 7 Enlargements from 2¼ x 3¼ negatives,	$2.00
No. 3, ditto, for 6½ x 8½ Enlargements from 3¼ x 4¼ negatives,	3.00
No. 4, ditto, for 8 x 10 Enlargements from 4 x 5 negatives (will also take 3¼ x 5½ negatives),	4.00

CARE FOR YOUR NEGATIVES.

You may not care to keep all the negatives you have made during the past year but you certainly do care to preserve most of them and some may be of unusual interest and value: negatives you may never have a chance to secure again if once lost, so the question of a systematic method of filing and preserving film negatives should appeal to you.

The Eastman Film Negative Album contains an index and one hundred strong tissue envelopes bound with strong covers, each envelope being numbered so that the negatives may be systematically filed and indexed The tissue envelope protects the film negative from scratches and finger marks and is sufficiently transparent to allow of the negative being examined without removing from the envelope

With your film negatives filed in this manner you can turn to the one you want as easily as turning the pages of a book. Ask your dealer to show you an Eastman Film Negative Album.



THE PRICE.

For 100 negatives, 3½ x 3½, or smaller	$0.75
For 100 " 3¼ x 4¼, or 4 x 5	1.00
For 100 " 3¼ x 5½, or smaller	1.00
For 100 " 5 x 7, or smaller	1.50

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Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

EASTMAN FLASH MATERIAL.

Showing Flash Sheet held in position.

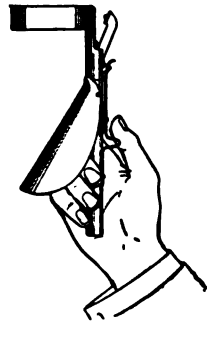
Eastman Flash Sheets and Flash Sheet Holder.

Eastman Flash Sheets burn slowly, giving a broad, soft spread of light and are preferable where instantaneous exposures are not absolutely necessary.

The Eastman Flash Sheet Holder is safe and convenient. Just slip a sheet under the spring, hold in an upright position at desired height and ignite from the back.

THE PRICE.

No. 1 Flash Sheets, per package of six sheets, 3 x 4,	$ .25
No. 2 Flash Sheets, per package of six sheets, 4 x 5,	.40
No. 3 Flash Sheets, per package of six sheets, 5 x 7,	.60
EASTMAN FLASH SHEET HOLDER,	1.00



Eastman Spreader Flash Cartridges and Spreader Flash Cartridge Pistol.

Eastman Spreader Flash Cartridges are best for instantaneous exposures. The cartridges are so constructed that the light is made to spread when the powder is ignited, affording a broader flash of light than with the ordinary flash cartridge. The fuse may be removed and the cartridge used with the Spreader Flash Cartridge Pistol. With the pistol, the flash may be made at the exact instant desired.

THE PRICE.

Eastman Spreader Flash Cartridges for use with pistol or fuse (price includes both fuse and cap) per pkg. of one-half doz.,	$ .25
Eastman Spreader Flash Pistol,	.50

Please Mention Camera Craft when Corresponding with Advertisers.

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Fog destroys the brilliancy of a negative.

Compare the rabbetedge of a Tank-Developed negative with one developed by a dark-room light. The Tank negative has clean edges—is clean throughout.

The tray developed negative usually shows fogged edges—that fog extends over the entire negative, deteriorating the halftones.

USE

The Eastman Plate Tank

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

All Dealers.

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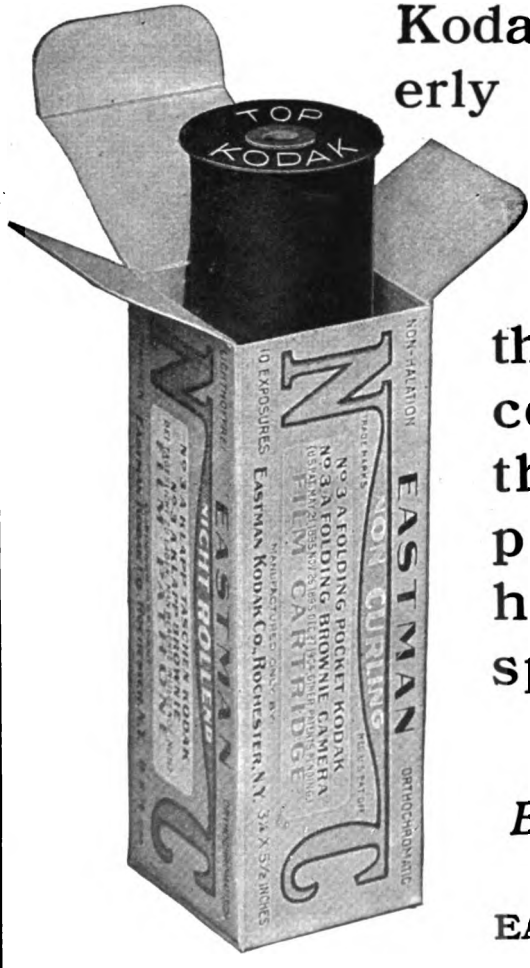
The Picture depends most of all upon the film.

BE SURE YOUR FILM IS

KODAK FILM



Kodak Film is properly orthochromatized for the average condition that the amateur encounters. It is thoroughly dependable and has speed to spare.

Insist on having Eastman N. C. Film.

EASTMAN KODAK CO.
ROCHESTER, N. Y.

All Dealers.

Please Mention Camera Craft when Corresponding with Advertisers.

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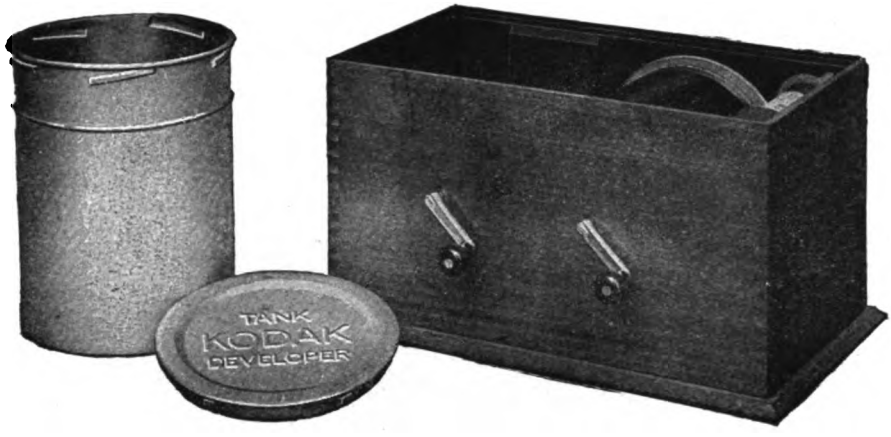

Developing is a pleasure with

THE KODAK FILM TANK

but aside from the convenience, and of greater importance, is the fact that the results are better.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

All Dealers.

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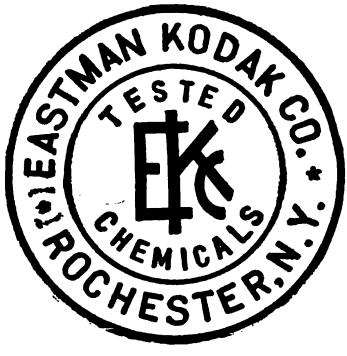

The mark of distinction.

We protect this seal with painstaking care that it may protect our products and our customers.

When you see the seal you know that the goods are right.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

All Dealers.

Please Mention Camera Craft when Corresponding with Advertisers.

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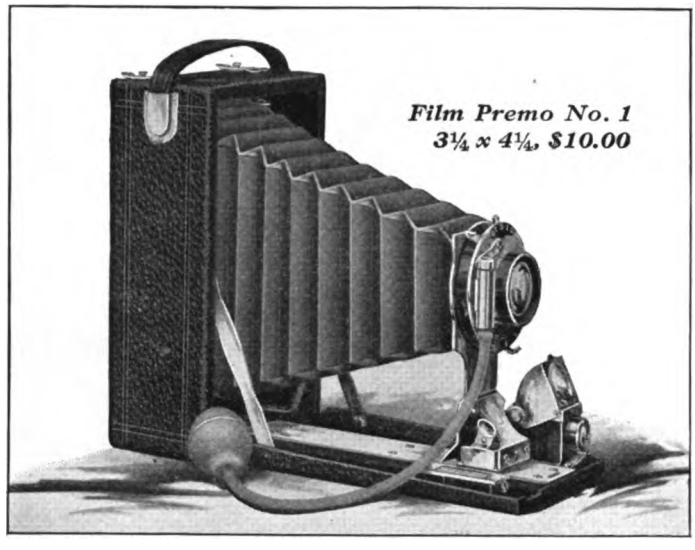

It's a merry Christmas for the one who gets

A PREMO

Whether it's a youngster of six or seven, a grandfather of sixty or seventy, or any one of the between ages, photography has a most alluring appeal.

So at Christmas time a Premo Camera will please the one you wish to please most, for Premos are so simple to understand and operate that one who receives a Premo can make good pictures from the start. You need no experience with a Premo.

Premos are made in fifty styles and sizes, at prices from $1.50 to $150.00. They have thirty years of experience behind them. They are the smallest, lightest, easiest to load and operate of all cameras. They load in daylight. Many of them take films or plates with equal facility. And using film from the famous Eastman N. C. stock, Premos will produce as good pictures as can be had. *Complete catalogue at the dealer's, or mailed on request.*

IMPORTANT—In writing, be sure to specify Premo catalogue.

ROCHESTER OPTICAL DIVISION

EASTMAN KODAK CO. **ROCHESTER, N. Y.**

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CORRECT STYLE FOR CHRISTMAS AND HOLIDAY PORTRAITS

For the Sheet Portrait

A RICH BROWN ARTIST PROOF

(AN ORIGINAL DESIGN)

THE half-tone doesn't give you any idea of what the **CONSERVATOIRE** Artist Proof is like. It has our own double score feature which holds the print and keeps it flat. It is made in a rich Brown enameled watered silk with a gilt design embossed on the flap. Made for 4 x 6 up to 11 x 14 prints.

If you are making sheet portraits and want a rich Brown folder, you really ought to insist on seeing the Conservatoire in all sizes.

Sample on receipt of 2 2-cent stamps

Designed and Manufactured by

Taprell, Loomis & Company

Chicago, U. S. A.

THE LEADING CARD NOVELTY HOUSE OF AMERICA

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Perfection In Home Photography

Wouldn't you like to get so perfect a picture as that reproduced herewith? The difficulty of securing just the correct lighting effects is only one of the interesting problems of indoor photography. Of course, no ordinary lens could be successfully used for taking pictures indoors. You need a lens of unusual speed and perfection—such as the

Bausch and Lomb-Zeiss TESSAR LENS

Every detail of the picture that is brought within the field is reproduced by the Tessar just as it was in the original. The shadows, the lines, the tones—all are caught by the wonderful light-gathering powers of this lens. Every possibility of camera work is at the command of those who own a Tessar—racing pictures, still life, landscape, groups and portraits.

If you are interested in indoor photography—write for our free booklet 45-H.

Our name, backed by over half a century of experience, is on all products—lenses, microscopes, field-glasses, projection apparatus, engineering and other scientific instruments.

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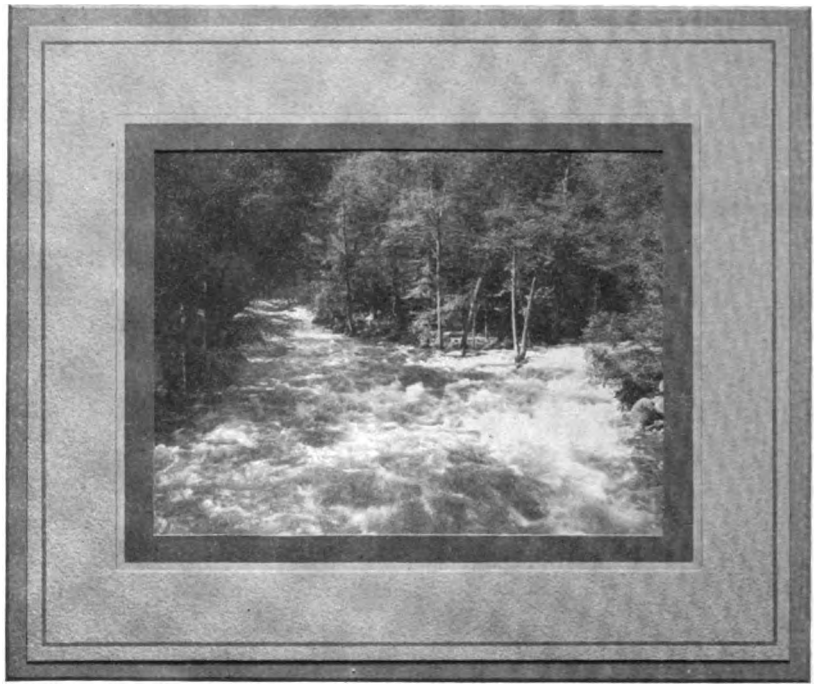
VIEWGROUP MAT-MOUNT



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Ash Grey Card with Light Grey Mat, for Black and White Photos
Madrid Brown Card with Mercedes Brown Mat, for Sepia Photos

NO.	SIZE OF CARD	FOR PHOTOS	PER 100
57	8¾ x 10¾	5 x 7 square	$6.25
68	10⅜ x 12⅜	6½ x 8½ square	8.25
810	12 x 14	8 x 10 square	9.25

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A new idea in view or group mounts with a substantial Bristol mat, having an embossed eggshell surface and tinted sunk center, which covers the edges of the print. The photo is tipped onto the heavy card on which the mat is fastened. This card, with a beveled edge, is the same color as the tinted sunk center, and is a trifle larger than the mat.

The Viewgroup Mat-Mount is a big seller and we urge every photographer to get an assortment from his dealer.

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ARTEX "Imperial" (fast)

ARTEX "SLOW" CARDS: Manufactured only in double weight stock, smooth semi-matte surface. Same surface as Artex Slow Grade B for portraiture.

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THE ARTEX PHOTO PAPER CO.

COLUMBUS, OHIO

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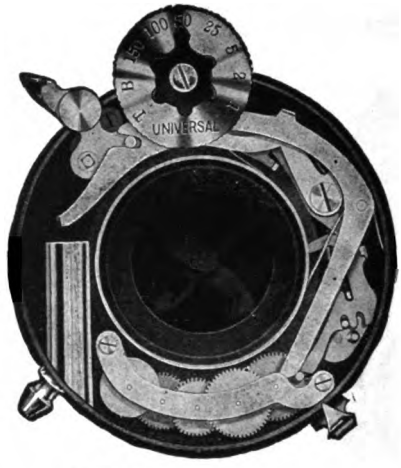

ILEX SHUTTERS

THE INGENIOUS INVENTION THAT MARKS ONE OF THE GREATEST MATERIAL ADVANCES IN PHOTOGRAPHY IN YEARS

Built without the troublesome and non-dependable **PUMPS** or **VALVES.**

The only Shutters ever made with a "wheel-arrangement" that cannot fail to work the same every time.

A Camera or Lens whether good, best or indifferent is no better than its **SHUTTER.** Ask your dealer. He knows that a Shutter dependent upon an air Pump or Valve will vary in action in different positions of Camera; and is also affected by changes of temperature; and by dust getting into the Pumps or Valves, thus impeding their action and eventually causing them to stick. So why waste your good money?

A Camera with Lens costs no more with an **ILEX SHUTTER** than it does with an inaccurate and non-dependable Pump or Valve Shutter, and it will save you the expense of changing it later for an **ILEX,** as eventually you will have to do to get the best results.

Our **ILEX UNIVERSAL** is the fastest Automatic Shutter ever produced, having a speed of 1-150 second, also T & B and all intermediate speeds down to one full second.

Our **ILEX ACME** is a "fast-speed" Shutter with a speed of 1-300 second, also T & B and all intermediate speeds down to one full second.

All **ILEX SHUTTERS** have the **ILEX** "Wheel-arrangement" embodied in their construction, and are absolutely accurate on all speeds.

INSIST UPON HAVING AN ILEX

when ordering your Camera, or if you already have a Camera with a Pump or Valve Shutter, get an **ILEX** and increase the efficiency of your camera ten-fold.

Please write us Direct if your Dealer cannot Supply you.

THE ILEX OPTICAL COMPANY

79 ILEX CIRCLE **ROCHESTER, N. Y.**

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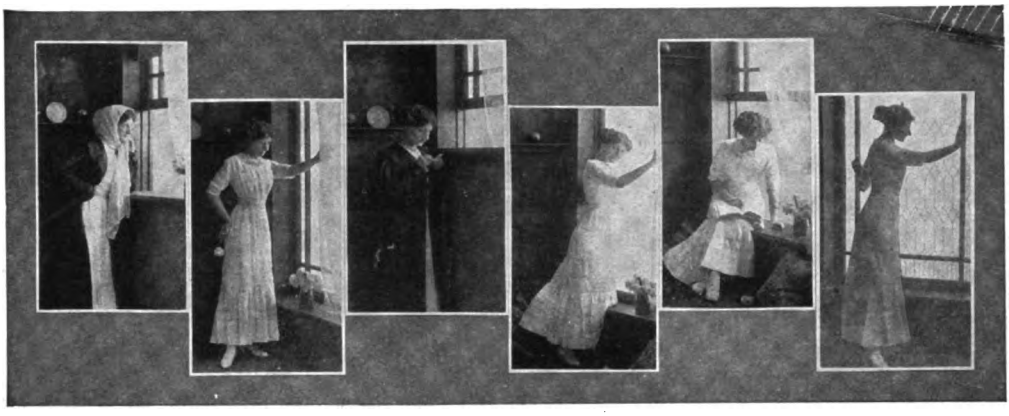
THE SEAVEY WINDOW ACCESSORY

FOR THOSE STRIKING HOME PORTRAIT EFFECTS



Show your customers a set of proofs like these and make the cost of this valuable accessory on the increased order on the first few settings. Put a few in your showcase, not too many, and see the new business come in. You can make an endless number of variations. No danger of the pictures becoming hackneyed. The public want something different. Be the first to give it to them.

THIS ACCESSORY WAS THE STRIKING FEATURE AT THE ST. PAUL CONVENTION. THE ORDERS POURED IN THERE.

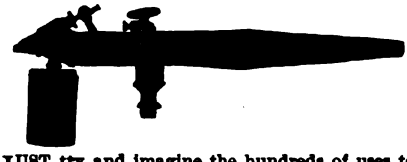
It is complete in every detail for making natural home portrait effects. It is not only a "real" window, but is adjustable in so many ways that endless effects can be secured. Can be raised and lowered. The leaded effect can be removed, different designs in leaded glass effects supplied. Can be reversed for either right or left hand lighting. The seat is adjustable. The paneled background with cup rail can be used separately.

Ask us for descriptive circular and name of nearest dealer

SEAVEY CO. (The greatest firm of Background Makers in the United States) HARTFORD BUILDING CHICAGO, ILL.

THE WOLD AIR BRUSH

THE photographer who is equipped with an Air Brush, and the slight amount of skill required to use it, is in a position to produce better and more artistic work than his competitors. The best studios in the large cities all use it. They realize its value—find it indispensable.



JUST try and imagine the hundreds of uses to which such a tool could be put. Cast aside the idea that there is required a lot of skill and artistic ability. For putting in backgrounds, vignetting, dodging the negative and work of that character, a child can use it. You are constantly finding new uses for it. You never find it laid aside like so many other things that are bought as an experiment. It always makes good.

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Manufacturers of the Celebrated Al-Vista Camera

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Three-fourths of all the flash powder business of the U. S. There is but one reason, viz:

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Seventy-five out of every one hundred consumers *know it now;* and the scales will fall from the eyes of the others in time.

We make it in *slow, normal* and *extra fast* grades. All same price and same illuminating power.

No. 1 Size, Half Ounce, Full Weight.....$ .35
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is a feature of the Bradley **"POPULAR"** and **"NATIONAL"** Trimmers. It provides a perfect cutting gauge every half inch, anywhere on the board. These lines cannot wear off as they are in—not on—the wood.

Other points of excellence are the blades that touch only where they cut—no scraping or dragging; the joint adjustment and the adjustable rule.

THE POPULAR	THE NATIONAL
Fifteen Inch Blade	Eighteen Inch Blade
Price, $7.25	Price, $11.00

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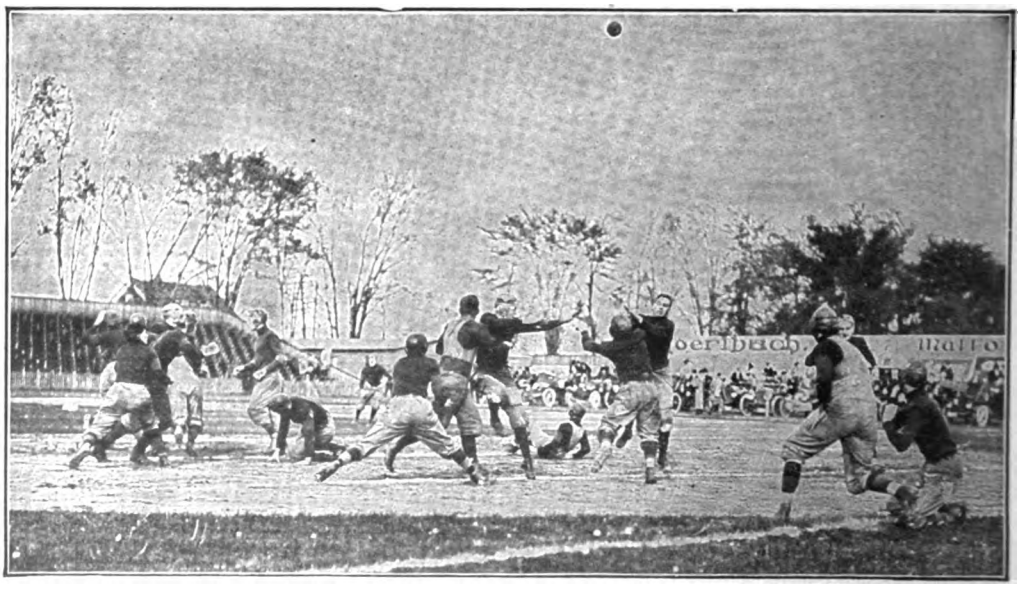

To obtain results like these—negatives clear, vivid and with absolute color value, the lens MUST be right. That Crown Lenses are eminently right is evidenced by the variety of outdoor work which can be done with them under any and all conditions. You are not asked to believe this without a trial. Your dealer can get any of our lenses for you and remember that unless you are satisfied, we will gladly take the lens back within a reasonable time.

Write for a Crown Catalog. At the same time give your dealer's name and address.

CROWN OPTICAL COMPANY **Rochester, N. Y.**

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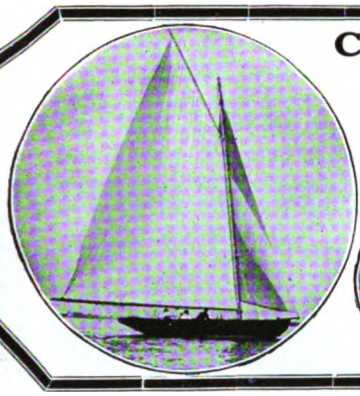
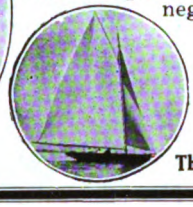


COOKE-TELAR LENSES F/7

Magnify distant objects

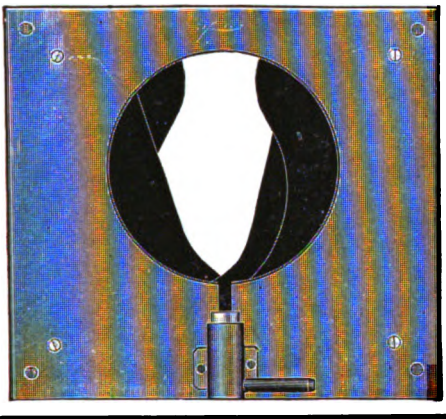
You merely unscrew your lens and insert the COOKE-TELAR. From the same position you then secure a picture just twice the size given by the ordinary lens, yet with the same length of camera bellows; and you get a well timed negative with the fastest speed of your shutter.



Indispensable for pictures of animals, yachts, aeroplanes, athletic events, and for everything which must be photographed from a distance. The lenses can be used with GRAFLEX cameras.

Write to-day for a full description, mailed free on request, with a fine catalogue of Cooke anastigmat lenses and "Helps to Photographers."

The TAYLOR-HOBSON CO., 1135 B'way, New York



LOW STUDIO SHUTTER No. 5

The Low Studio Shutter No. 5 has four wings all operating from the bottom of the shutter, thus giving the correct introduction of light, and allows a large opening in a small shutter. It operates with ease and rapidity, is simple, accurate, reliable, durable, and noiseless in opening. For years it has been "Weighed in the Balances and not found Wanting." That is the test that convinces.

Opening	Outside Dimensions	Price	Opening	Outside Dimensions	Price
1½ inch	3⅜	$4 00	3 inch	5 1-16x5 5-8	$5.00
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2 "	3 7-8	4.00	3½ "	5 3 8 x6 3-8	5.00
2¼ "	4⅜	4 50	4 "	6 5-8 x7 1-8	5.50
2½ "	4¾	4 50	4½ "	7 3-8 x8 1-16	6 00
2¾ "	5¼	4 50	5 "	7 7-8 x9	6.50

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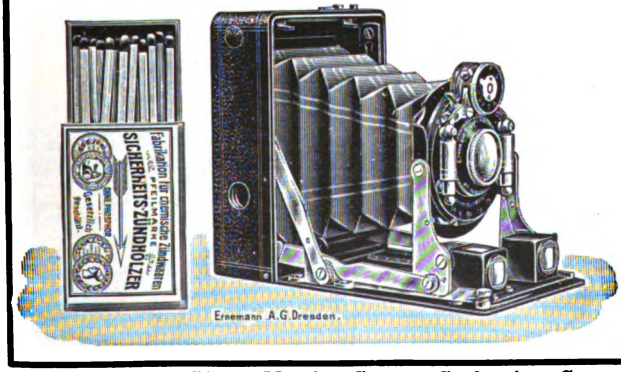

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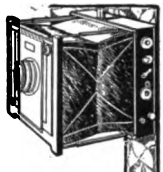

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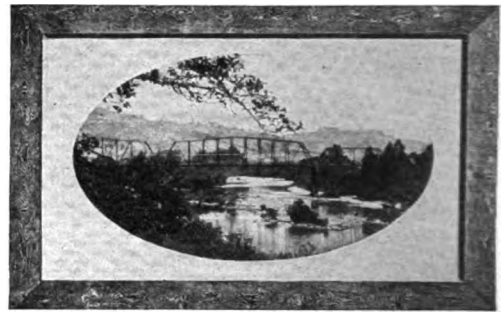

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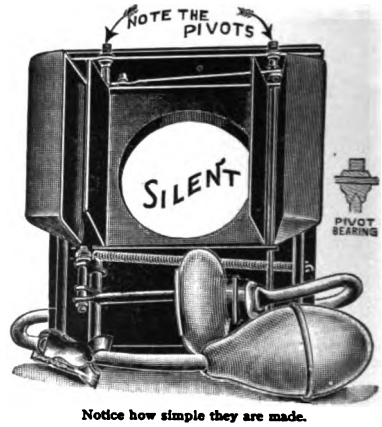

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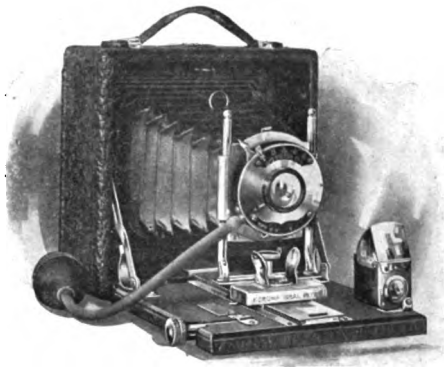

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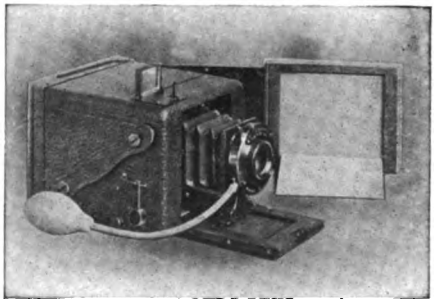

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The Tripak Camera makes ordinary and orthochromatic negatives, time or instantaneous, on plates or films, but also makes, on the patent trichromatic Plate Pack, at one exposure, a set of trichromatic negatives, from which, by a simple and beautiful process, any number of natural color transparencies can be made.

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The Recognized Artists in Pictorial Photography have found the Semi-Achromatic Lenses a very necessary part of their equipment.

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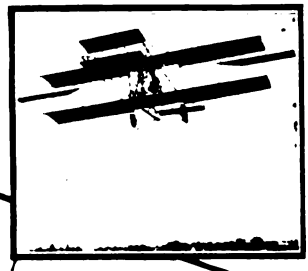

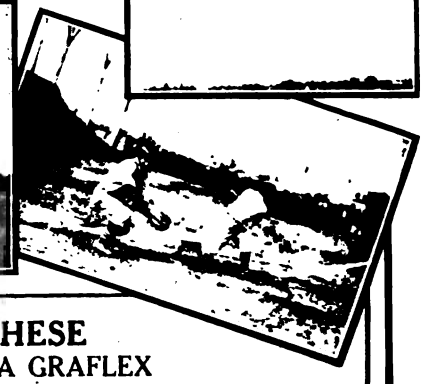

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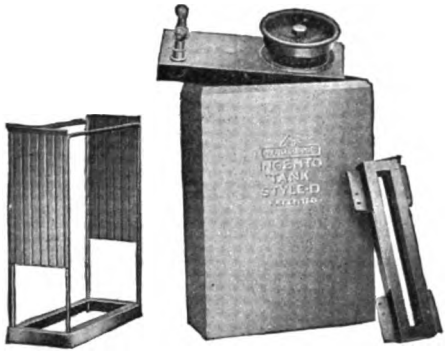

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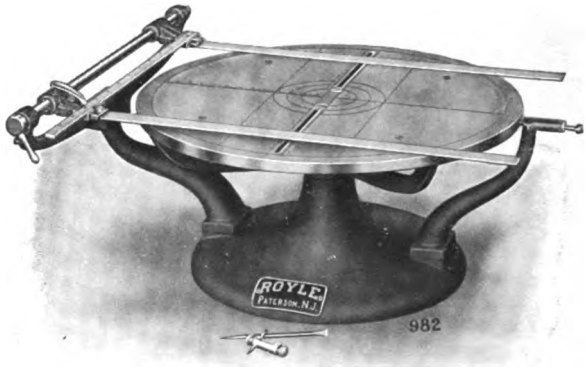

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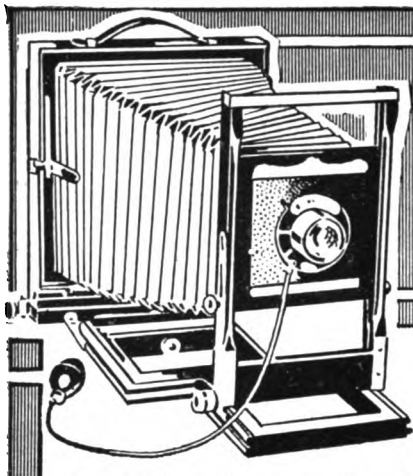

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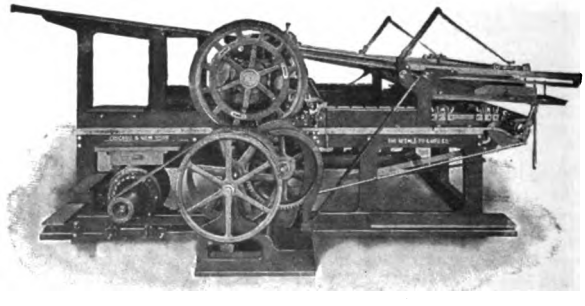

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Features of Sunset Magazine for January, 1912

"SAN FRANCISCO KNOWS HOW!" The first written statement by the President of the Panama-Pacific Exposition Company. In this article Mr. Charles C. Moore, at the helm of the great craft launched by President Taft at San Francisco in October, answers authoritatively the question, "Can the Exposition Directors do anything different to what has been done?" Mr. Moore's answer is enough to sharpen the expectation of every one who reads it. His article is illustrated in colors from paintings by Charles H. Grant, W. H. Bull, Walter Francis and C. K. Bonestell, Jr. These paintings give form and color to dreams of the Fair. There is a view of the International Meet of Warships, giving the "Opening Salute"; a scene in the streets of San Francisco when the great Chinese dragon swims in splendor in an oriental pageant; a picture of the Yacht Harbor at Harbor View, crowded with bright-colored sails. Also there is a bird's-eye view of the city, in colors, showing the spread of the Exposition.

A TOUR OF THE WORLD IN SAN FRANCISCO. A series of photographic art studies, in the Exposition City, that might as well have been made in foreign lands. The subjects include Spain, Italy, China, Japan, Holland, Mexico and Greece.

WHAT THE PANAMA CANAL MEANS TO THE PACIFIC COAST. By Congressman Joseph R. Knowland. A discussion, by a man who knows, of the real reason for the rejoicing to be expressed in the Panama Pacific Exposition at San Francisco and the Panama-California Exposition at San Diego.

JAPAN AND THE UNITED STATES. By Dr. David Starr Jordan. The President of Stanford University has recently returned from a trip to Japan where he lectured to interested crowds on the subject of International Peace.

STARS IN THE WESTERN DRAMATIC FIRMAMENT. Art photographs of attractive stage celebrities soon to be twinkling in the theatrical sky of the Pacific Coast.

WESTERN PERSONALITIES. Searchlight acquaintance, by keen analysis and fine half-tone portraits, with people of the hour—men who have the Big Jobs to perform for California. It is worth your while to know, through these printed pages, these men of destiny.

FICTION

THE GHOST OF THE ALMADEN. By Stella Wynne Heron. A rollicking tale of true love at a wayside inn in California—how a clever lass played a practical joke and won both husband and fortune. Illustrated by A. L. Bohnen.

PIGS IN POKES. By Peter B. Kyne. Just as funny as it sounds—another of the inimitable "Captain Scraggs" stories, which SUNSET has captured for a 1912 series, by this famous writer who is dividing his time between the Saturday Evening Post and this magazine. Illustrated by Grant Wallace from life studies of the original "Scraggs", "Gibney" and "McGuffey" on San Francisco's waterfront.

OFFICER OF THE DAY. By Hugh Johnson, the well-known author of army tales. A human-interest story that will surprise even the hardest-headed bachelor reader into the knowledge that he has a heart. Illustrated in color by Walter Francis.

CAPTAIN OF HIS SOUL. By Edmund Mitchell. Another instalment of this remarkable novel, which deals with the potentialities of a man's character. Step by step the reader follows the rise of a "hobo" to deserved power over the people and the conditions that once dominated him. Illustrated by Maynard Dixon.

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